20th April 2023

Revised: Reporting on St Barbara Leonora Projects

Genesis Minerals Limited (**Genesis**) (ASX: GMD) refers to the investor presentation announced to ASX on 17th April 2023.

For completeness, Genesis announces further information in relation to the Mineral Resource and Ore Reserves in relation to St Barbara's Leonora assets.

The Total Mineral Resource and Total Ore Reserve estimates for the St Barbara Projects are shown on the following pages.

This announcement is approved for release by Raleigh Finlayson, Managing Director of Genesis.

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GENESIS MINERALS LIMITED

Total Mineral Resources by deposit

Region	Project	Measured			Indicated			Inferred			Total		
		Tonnes ('000)	Grade (g/t)	Ounces ('000)	Tonnes ('000)	Grade (g/t)	Ounces ('000)	Tonnes ('000)	Grade (g/t)	Ounces ('000)	Tonnes ('000)	Grade (g/t)	Ounces ('000)
Leonora, WA	Gwalia Deeps	3,573	5.5	633	18,208	5.7	3,326	2,417	6.6	515	24,198	5.8	4,473
	Gwalia Shallows	1,129	3.5	128	1,492	3.7	178	771	3.3	81	3,391	3.5	386
	Gwalia Open Pit	5,864	2.3	434	3,150	2.0	200	-	-	-	9,014	2.2	634
	Harbour Lights	-	-	-	12,569	1.7	674	1,158	2.0	73	13,726	1.7	747
	Tower Hill	-	-	-	20,682	1.8	1,177	-	-	-	20,682	1.8	1,177
	Total Leonora	**10,566**	**3.5**	**1,195**	**56,101**	**3.1**	**5,555**	**4,346**	**4.8**	**669**	**71,011**	**3.2**	**7,417**
Bardoc, WA	Aphrodite Open Pit	-	-	-	13,458	1.5	666	5,321	1.3	229	18,780	1.5	895
	Aphrodite Underground	-	-	-	4,156	3.7	497	2,571	3.3	271	6,726	3.6	768
	Zoroastrian Open Pit	-	-	-	3,702	1.9	228	1,730	1.6	87	5,432	1.8	315
	Zoroastrian Underground	-	-	-	800	4.7	120	817	3.4	90	1,617	4.0	209
	Excelsior	-	-	-	9,645	1.0	313	1,685	0.8	41	11,330	1.0	354
	Bardoc Satellite Open Pits	152	2.3	11	4,314	1.6	217	4,950	1.6	251	9,417	1.6	480
	Total Bardoc	**152**	**2.3**	**11**	**36,075**	**1.8**	**2,041**	**17,074**	**1.8**	**969**	**53,302**	**1.8**	**3,021**
	Total All Projects	**10,718**	**3.5**	**1,206**	**92,176**	**2.6**	**7,596**	**21,420**	**2.4**	**1,638**	**124,313**	**2.6**	**10,438**

Notes

1. Mineral Resources are reported inclusive of Ore Reserves. Reported as at 31 December 2022 refer ASX:SBM 'Ore Reserves and Mineral Resources Statements as at 31 December 2022' February 22, 2023
2. Cut-off Grades Gwalia (2.5 g/t Au), Gwalia Open Pit (0.4 g/t Au), Harbour Lights (0.4 g/t Au Oxide and 0.8 g/t Au Sulphide), Tower Hill (0.4 g/t Au), Aphrodite Open Cut (variable), Aphrodite Underground (1.7g/t Au), Zoroastrian Open Cut (0.5 g/t Au), Zoroastrian Underground (1.6g/t Au), Excelsior (0.3 g/t Au), Bardoc Satellite Open Pits (0.4 – 0.6 g/t Au)
3. Gwalia Open Pit ,Harbour Lights and Tower Hill Mineral Resources are reported constrained by a A$2,500/oz pit shell.
4. Bardoc Satellite Open Pits include Mayday North, Talbot North, Bulletin South, Duke North, Lochinvar, El Dorado, North Kanowna Star, South Castlereagh, Mulwarrie, Nerrin, Nerrin and Vettersburg South
5. Rounding may result in apparent summation differences between tonnes, grade and contained metal.

GENESIS MINERALS LIMITED

Total Ore Reserves by deposit

Project	Proved			Probable			Total		
	Tonnes ('000)	Grade (g/t)	Ounces ('000)	Tonnes ('000)	Grade (g/t)	Ounces ('000)	Tonnes ('000)	Grade (g/t)	Ounces ('000)
Gwalia	2,121	5.1	345	10,525	5.0	1,696	12,647	5.0	2,041
Aphrodite	-	-	-	2,782	3.6	322	2,782	3.6	322
Zoroastrian	-	-	-	795	3.8	97	795	3.8	97
Tower Hill	-	-	-	9,700	1.8	560	9,700	1.8	560
Total	**2,121**	**5.1**	**345**	**23,802**	**3.5**	**2,675**	**25,924**	**3.6**	**3,020**

Notes:

1. Reported as at 31 December 2022 refer ASX:SBM 'Ore Reserves and Mineral Resources Statements as at 31 December 2022' February 22, 2023
2. Ore Reserves are based on a gold price of A$2,000/oz
3. Cut-off Grades Gwalia (4.0 g/t Au), Aphrodite (1.9g/t Au), Zoroastrian (2.0g/t Au) , Tower Hill (0.4g/t Au)
4. Mineral Resources are reported inclusive of Ore Reserves.
5. Rounding may result in apparent summation differences between tonnes, grade and contained metal.

RESOURCES

GWALIA RESOURCE

Geology and Geological Interpretation

Gold mineralisation at Gwalia occurs as a number of en echelon, moderately east dipping foliation parallel lodes within strongly potassic altered mafic rocks and extends over a strike length of approximately 500 m and to a vertical depth of at least 2,300 m. Four primary lodes (Main Lode, South West Branch, South Gwalia Series and West Lode) have been identified and the geometries summarised below.

Mineralisation domains are defined by abundance of quartz and quartz/carbonate veining, the presence of distinctive laminated veining (quartz/sericite/sulphides +/- au), strong potassic alteration, abundance of sulphides (commonly >3% pyrite) and elevated gold grade (>0.5g/t Au).

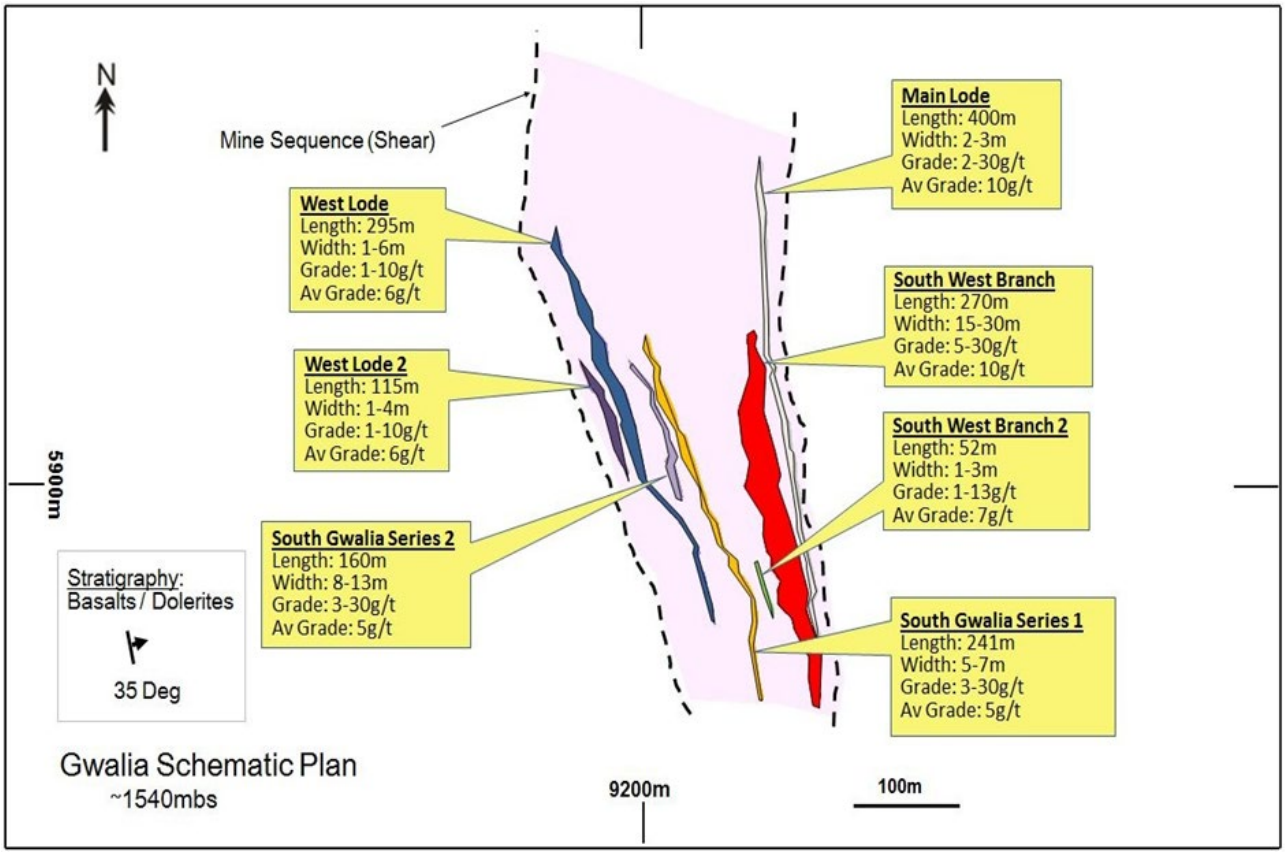

Figure 1: Gwalia lode schematic

Drilling Techniques

Surface and underground diamond drill holes used NQ2 (50.6mm) sized core (standard tubes). SBM surface drill holes have been down hole surveyed by north seeking gyro and underground drill holes have been surveyed by single shot electronic camera. Surface holes are orientated using a Reflex ACT II RD orientation tool.

Data spacing for underground resource definition is approximately 20m x 25m and surface drilling is approximately 60m x 80m. Drilling data is sufficient to establish continuity for all lodes.

Sampling and sub-sampling techniques

SBM half core is cut using a core saw before being sent to an accredited lab (SGS laboratory in Kalgoorlie) where the entire sample is crushed to achieve particle size <4mm followed by complete pulverisation (90% passing 75 µm).

Sample Analysis Method

SBM samples were analysed for gold using fire assay with a 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS). QC included insertion of 3 commercial standards (1 per 25 samples), use of barren flush material between designated high-grade samples during the pulverising stage, re-numbered sample pulp residues re-submitted to original laboratory, and sample pulp residues submitted to accredited umpire laboratory, submission of residual (duplicate) half core from ore intervals.

Estimation Methodology

All domains were estimated using ordinary kriging except for South West Branch below approximately 1240 metres below surface where indicator kriging was used for grade estimation.

Four parent block sizes have been estimated; 4mE x 8mN x 4mRL for areas covered by underground grade control drilling, 8mE x 16mN x 4mRL for the area covered by resource development drilling, 16mE x 32mN x 4mRL for areas covered by surface drilling below approximately 1,800 metres vertical depth and 32mE x 32mN x 32mRL for the Mafic Hanging wall.

Estimation was completed using Datamine Studio RM. Search parameters for the gold estimation reflect a high-grade plunge orientation east-north-east for WL, south-east to east for SGS and south-east for SWB and ML consistent with geological observation of high grade mineralisation geometry.

Cut-off Grades

The model is reported at a cut-off of 2.5g/t Au on 20mRL by 20mN panels for each lode to account for non-selective mining internally within each lode.

Resource Classification

The resource is classified as a function of drill spacing, geological continuity and mining. Areas where grade control drilling has been completed to 20m x 30m and geological continuity has been established through mining are classified as Measured. Areas where drill density is 30m x 40m, 60m x 80m or less with high geological continuity are classified as Indicated and elsewhere where drill density is sparse classified as Inferred.

Mining Assumptions

The mining method is underground, open stoping with paste fill. The mine is in production with extensive mining history.

Metallurgical Assumptions

All Gwalia ore is trucked to the Gwalia processing plant. The processing plant is located at St Barbara's Leonora Operations and consists of a three-stage crushing circuit, single-stage milling circuit and hybrid carbon-in-leach (CIL) circuit with one designated leach tank and seven adsorption tanks. Gold is recovered from activated carbon into concentrated solution via a split AARL type elution circuit. Electrowinning and smelting are conducted in an adjacent secure gold room. The tailings from the process are thickened and pumped to a paddock type tailings storage facility with multi-spigot distribution.

The technology associated with processing of Gwalia ore is currently in operation and is based on industry standard practices.

Metallurgical recovery is modelled based on the observed relationship between head grade and recovery. The average of the modelled metallurgical recovery over the Ore Reserve mine plan is 95.8%.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

TOWER HILL RESOURCE

Geology and Geological Interpretation

Gold mineralization at Tower Hill is hosted within a moderately (35 - 50°) east-dipping quartz vein package adjacent to the contact of granite and strongly foliated ultramafic rocks. Quartz-gold vein lodes strike north to north-northwest and dip moderately (45) east with strike lengths of up to 600 m and widths from less than a metre to a vein package with a horizontal width of up to 50 m.

Ultramafic rocks hosting the mineralized veins are strongly deformed reflecting vertical shortening of the rock package and normal shear along the granite contact. As part of the sub-vertical shortening event, a gently east-dipping, low-displacement (<50 m) normal fault zone developed and offset the granite contact. The main phase of gold mineralization is inferred to have occurred later during sub-horizontal east-west shortening and sub-vertical extension at which time reactivation of foliated rocks at the granite contact and of the gently east dipping fault zone occurred. Gently east-dipping extensional veins localized around the contact and fault support reverse reactivation. Reactivation of this fault zone and the granite contact, which has acted as a releasing bend, is important control for the localization of quartz veins and accompanying gold mineralization.

Within the vein package controls on gold distribution are more elusive. Detailed geochemical sampling indicates that gold is associated with laminations, sulphides and fracturing. However, laminations and sulphides are not always diagnostic of elevated gold grades suggesting that visual definition of high-grade ore zones may be problematic. Furthermore, gold-bearing, laminations and sulphide aggregates have limited continuity at the drill core scale (<10 cm) and therefore high-grade domains around these volumes may not be geologically robust. The planar, geometrically consistent high grade domains apparent within drill hole assay data may represent localized zones that have undergone re-activation and focused hydrothermal fluid flow during gold mineralization and feature as zones of increased lamination intensity but this requires further work and may not be possible to validate without high density drilling.

Mineralisation domains are defined by quartz veining, proximity to the granite contact and structural controls as well as gold grade.

Drilling Techniques

SBM diamond holes typically used NQ (47.6mm) and HQ (63.5mm) sized core (standard double tubes). Core was oriented using Ace Core Orientation and Ezy Mark orientation tools. Drill holes were down hole surveyed by either north seeking gyro within the rods or by electronic multi-shot in open holes. Less than 10% of SBM holes were surveyed down hole using a Reflex Single Shot camera. RC holes used mainly 5½" reverse circulation face sampling hammers.

Sampling and sub-sampling techniques

Sampling boundaries are geologically defined and mostly one metre in length unless a significant geological feature warrants a change from this standard unit. Half core was sampled on largely 1m intervals based on geological boundaries. Core was cut along a plane passing through the basal orientation mark using a diamond saw and was submitted for total pulverisation (85% passing 75 µm).

Sample Analysis Method

SBM samples were analysed for gold using fire assay with a 40g charge and analysis by flame atomic absorption spectrometry. QC included insertion of 4 commercial standards per submission batch (4 commercial standards every 50 samples for diamond core), insertion of field duplicates every 40m and 2 blank control samples for every 100 samples. Sample pulp residues were submitted to an alternate laboratory.

Estimation Methodology

Gold grade was estimated by ordinary kriging 1m composites constrained by lode boundaries for a parent block size of x = 10m * y = 20m * z = 5m. Search parameters reflect the moderate NE plunge control of mineralisation.

Cut-off Grades

The model is reported at a 0.4g/t Au cut-off which is close to the expected marginal cut-off grade based on a A$2,500/ounce gold price. The cut-off grade includes the following considerations:

- Mining Cost - $3.67/t
- Processing Cost (inc. G&A and sustaining capital) - $23.90/t
- Processing recovery – 91.7%
- Pit slope angles of 41° footwall, 43° hanging wall

Resource Classification

The variogram model shows that 90% of total sill is reached at approximately 100m down plunge and within 45m perpendicular. Based on this, the average data spacing of between 40m by 30m (up to 80m by 60m) for the bulk of the Tower Hill Resource below the pit is considered adequate to classify the majority of the resource as Indicated. The down dip extensions to the resource, which are based on limited data, are considered Inferred.

Mining Assumptions

Mining is proposed by contract truck and excavator mining, using drill and blast on 10 m benches and excavators operating on 5 m benches near surface for bulk waste mining and then transitioning to drill and blast on 5 m benches and excavators operating on 2.5 m benches.

Metallurgical Assumptions

The free milling Tower Hill ore will be processed through the nearby upgraded 2.1 Mtpa Gwalia processing plant. The existing plant consists of a 1.4 Mtpa crushing and grinding circuit followed by a conventional gravity recovery and carbon-in-leach (CIL) circuit.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

HARBOUR LIGHTS RESOURCE

Geology and Geological Interpretation

Harbour lights deposit is a complex structurally controlled ore body hosted in a sequence of folded dolerite sills, mafic schist and ultramafic rock. Shear and fold structure dominate the stratigraphic and alteration geometries, deformation that is consistent with a compressional dextral, reverse slip, east side up tectonic transport. This primary deformation event resulted in the shear and shear folded setting of Harbour Lights which later acted and as structural traps and pathways for gold bearing hydrothermal fluids to migrate.

Gold mineralisation is localised within two distinct lithologies at Harbour lights. These are the Hanging wall mafics and the Central Ultramafic. Both areas share sulphide and alteration characteristics but differ in host rock. Alteration consists of broad zones of sericite and biotite alteration with localised fuchsite generally at the contacts. Potassic alteration is not necessarily diagnostic of gold grades as it is mostly pervasive however alteration in combination with sulphides and quartz carbonate veining is. High grade mineralisation generally consists of an increased quantity of quartz carbonate veining, alteration and high quantities of arsenopyrite that occur as weakly orientated needles in aggregated bands in the selvages of veining.

Mineralised domains are modelled based on the logging of sulphides (pyrite and arsenopyrite), quartz veining and potassic alteration halos

Drilling Techniques

SBM diamond drill holes used NQ2 (50.6mm) sized core (standard tubes). SBM surface drill holes have been down hole surveyed by north seeking gyro. Holes are orientated using a Reflex ACT II RD orientation tool.

Details of earlier RC and DDH drilling techniques have not been located. Diamond holes were surveyed by single shot camera.

Sampling and sub-sampling techniques

SBM half core is cut using a core saw before being sent to an accredited lab (SGS laboratory in Kalgoorlie) where the entire sample is crushed to achieve particle size <4mm followed by complete pulverisation (90% passing 75 µm).

Sub-sampling techniques and sample preparation for earlier holes are unknown but are assumed to conform to standard Eastern Goldfields practices of the time.

Sample Analysis Method

SBM samples were analysed for gold using fire assay with a 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS). QC included insertion of 3 commercial standards (1 per 25 samples), use of barren flush material between designated high-grade samples during the pulverising stage, re-numbered sample pulp residues re-submitted to original laboratory, and sample pulp residues submitted to accredited umpire laboratory, submission of residual (duplicate) half core from ore intervals.

The analytical method for earlier holes is unknown. Quality control was limited to analysis of pulp duplicates and the drilling of twin holes. SBM resampled selected intervals of earlier drill core which demonstrated good correlation with original assay values. This resampling demonstrated that there was no bias in the original analysis.

Estimation Methodology

Gold grade was estimated using ordinary kriging with a parent cell size of 10mE x 10mN x 5mRL which is approximately half the drill spacing in the upper areas of the deposit.

Cut-off Grades

The model is reported at a 0.4g/t Au cut-off for oxide and 0.8g/t Au for sulphide which is close to the expected marginal cut-off grade based on a A$2,500/ounce gold price.

Resource Classification

The resource is classified as a function of drill spacing, geological continuity and mining. Areas where drill hole spacing is up to 50m by 50m and the average distance to composites is less than 50m are classified as Indicated. At depth and at the edges of the deposit where the drill spacing is wider the mineralisation is classified as Inferred.

Mining Assumptions

The mining method is open pit.

Metallurgical Assumptions

Metallurgical recovery is expected to be 90% for oxide and 85.5% for sulphide based on initial test work.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

APHRODITE RESOURCE

Geology and Geological Interpretation

The Aphrodite deposit falls within the Bardoc Tectonic zone of the Kalgoorlie Terrane, Yilgarn Craton. The tectonic zone is an intensely sheared corridor of Late Archaean supracrustal rocks, ~80 km-long and up to 12 km wide. These are bounded by pre- to syn-tectonic granites, the Goongarrie-Mt. Pleasant Dome in the west and the Scotia-Kanowna Dome in the east.

The Aphrodite deposit is defined by two sub-vertical NNW striking brittle-ductile shears within clastic sediment and porphyry and volcaniclastic host lithologies. Shears are generally narrow, though associated alteration and gold mineralisation can be extensive either side of the shear. Lower grade gold mineralisation is associated with intense silica-sericite-biotite alteration, and often spectacular quartz-sulphide veining alteration. Higher gold grades are evident when the alteration is overprinted by an array of thin (2-10mm wide) conjugate quartz-pyrite (+/- arsenopyrite) tension veins.

The open pit resource model was interpreted to a 0.3g/t cut-off grade guided by presence and intensity of quartz veining and alteration and structural data, principally foliation.

The underground resource model was interpreted to a 1g/t cut-off grade guided by presence and intensity of quartz veining and alteration and structural data, principally foliation.

Drilling Techniques

Reverse Circulation drilling employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The diamond drilling is HQ size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter).

All drill core was orientated by the drilling contractor, usually every 3m run.

Sampling and sub-sampling techniques

For diamond core (DC) collected by Bardoc Gold (BDC) a minimum of quarter cut drill core taken from the right hand side of the core looking down hole was sampled. Core was cut by BDC staff onsite at the core cutting facility.

The BDC DC samples were oven dried, jaw crushed to nominal <10mm, 3.5kg was obtained by riffle splitting and the remainder of the coarse reject was bagged while the 3.5kg was pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample was then bagged and approximately 200g extracted by spatula to a numbered paper bag that was used for a 40g or 50g fire assay charge.

All BDC Reverse Circulation (RC) samples were put through a cone splitter and the sample collected in a unique pre-numbered calico sample bag. The moisture content of each sample was recorded in the database.

The BDC RC samples were sorted, oven dried, and the entire sample was pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample was then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 40 or 50g fire assay charge.

BDC RC and DC samples submitted to the laboratory were sorted and reconciled against the submission documents. BDC inserted blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20.

In the field every 10th metre from the bulk sample port on the cone splitter was bagged and placed in order on the ground with other samples. This sample was then used for collection of field duplicates via riffle splitting. RC field duplicate samples were collected after results were received from the original sample assay. Generally, field duplicates were only collected where the original assay result was equal to or greater than 0.1g/t Au. The field duplicates were submitted to the laboratory for the standard assay process.

Sample Analysis Method

BDC samples were analysed for gold using fire assay with a 40g charge and analysis by flame Atomic Absorption Spectrometry (AAS).

Estimation Methodology

Gold grade for the open pit resource was estimated using localised uniform conditioning with a panel size of 10mE x 20mN x 5mRL and an SMU if 2.5mE x 5.0mN x 2.5mRL. For the underground resource gold grade was estimated using ordinary kriging for a parent cell size of 5.0mE x 5.0mN x 5.0mRL

Cut-off Grades

The underground resource is reported above a 1.7g/t cut-off below 235m below surface. The open pit resource is reported at above 235m below surface with cut-off grades varying with depth and material type.

Resource Classification

The classification is based on drill hole spacing, geological continuity and estimation quality parameters. In areas with drill spacing up to approximately ~40mE x 40mN and with reasonable confidence in the geological interpretation the resource is classified as Indicated. Resources are classified as Inferred with drill spacing up to ~80mE x 80mN.

Mining Assumptions

The open pit estimate has been undertaken on the assumption of open pit mining methods; the selection of SMU size was based on the scale of mining equipment likely to be used.

The underground estimate is planned to be mined using conventional underground mining methods. The mining will consist of Longhole open Stoping (LHOS) on 20m level spacing with voids remaining open and insitu rock rib and sill pillars used for stability.

Metallurgical Assumptions

The Aphrodite deposit has never been mined. BDC conducted extensive metallurgical test work on all lithology types from various weathering profiles. The testwork has concluded the fresh and transitional ore is refractory in nature. There have been many generations of testwork and several processing methods investigated, currently BDC has determined that a flotation concentrate of sulphide ore will be produced and sold to 3rd parties.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

ZOROASTRIAN RESOURCE

Geology and Geological Interpretation

The Zoroastrian deposit occurs on the eastern limb of a narrow NNW trending structure, the Bardoc-Broad Arrow syncline within the Bardoc Tectonic Zone. In this zone the sequence comprises highly deformed fault slice lenses of intercalated Archaean mafic and ultramafic volcanics and metasediments.

The mineralisation in the Zoroastrian area is predominately associated with a complex array of multiple dimensional and variable orientated quartz veins and stock works within the differentiated Zoroastrian Dolerite. In places a surficial 1-2m thick calcrete/lateritic gold bearing horizon and small near surface supergene pods exist.

The Zoroastrian dolerite is thought to be the stratigraphic equivalent of the Paddington dolerite which hosted the plus 1Moz ounce mine at Paddington itself with both deposits bounded to the west by the Black Flag sediments and to the east by the Mount Corlac ultramafics. Shear zones up to 10m wide containing gold bearing laminated quartz veining (5cm to 1m wide) occur on both contacts.

Drilling Techniques

Prior to 2009 19 diamond (DC) and 420 reverse circulation (RC) holes were drilled over the area. These holes are without documentation of the rig type and capability, core size, sample selection and handling.

For post 2009, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling was NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter).

All drill core was orientated by the drilling contractor with a down the hole Ace system.

Sampling and sub-sampling techniques

For diamond core (DC) collected by Bardoc Gold (BDC) a minimum of quarter cut drill core taken from the right-hand side of the core looking down hole was sampled. Core was cut by BDC staff onsite at the core cutting facility.

The BDC DC samples were oven dried, jaw crushed to nominal <10mm, 3.5kg was obtained by riffle splitting and the remainder of the coarse reject was bagged while the 3.5kg was pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample was then bagged and approximately 200g extracted by spatula to a numbered paper bag that was used for a 40g or 50g fire assay charge.

All BDC Reverse Circulation (RC) samples were put through a cone splitter and the sample collected in a unique pre-numbered calico sample bag. The moisture content of each sample was recorded in the database.

The BDC RC samples were sorted, oven dried, and the entire sample was pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample was then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 40 or 50g fire assay charge.

BDC RC and DC samples submitted to the laboratory were sorted and reconciled against the submission documents. BDC inserted blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20.

In the field every 10th metre from the bulk sample port on the cone splitter was bagged and placed in order on the ground with other samples. This sample was then used for collection of field duplicates via riffle splitting. RC field duplicate samples were collected after results were received from the original sample assay. Generally, field duplicates were only collected where the original assay result was equal to or greater than 0.1g/t Au. The field duplicates were submitted to the laboratory for the standard assay process.

Sample Analysis Method

BDC samples were analysed for gold using fire assay with a 40 or 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS).

Estimation Methodology

Gold grade was estimated using localised uniform conditioning for open pit mineral resources with a panel size of 8mE x 15mE x 10mRL. An SMU block size of 2mE x 5mN x 2.5mRL was chosen for the localisation process. For the underground resource gold grade was estimated using ordinary kriging using a 4mE x 15mN x 8mRL parent block size.

Cut-off Grades

The model is reported at a 0.4g/t Au cut-off for open pit resources above 200 metres below surface and at 1.2g/t Au for underground resource below 200 metres below surface.

Resource Classification

The classification takes account of confidence in the geological interpretation and sample density. In order to avoid a mosaic style of classification, solid wireframes were constructed to encompass areas considered to adequately fulfil the requirement to be classified as either, measured, indicated or inferred:

- Indicated – Areas with drill spacing up to approximately 35mE x 35mN and with reasonable confidence in the geology
- Inferred – Areas with drill spacing in excess of 35mE x 35mN.

Mining Assumptions

This open pit resource SMU size was based on the scale of mining equipment used in previous mining at Zoroastrian.

The underground resource is planned to be mined using conventional underground mining methods. The mining will consist of Longhole open Stoping (LHOS) on 20m level spacing with voids remaining open and insitu rock rib and sill pillars used for stability.

Metallurgical Assumptions

The Zoroastrian deposit has been mined successfully with no metallurgical issues. Gold recoveries in excess of 90% were achieved during mining of Central open pit during 2015-2016.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

EXCELSIOR RESOURCE

Geology and Geological Interpretation

The geology of the system and the gold distribution is complex, however there is good continuity of mineralisation established by 15m x 15m close spaced drilling near surface and 30m x 30m drilling at depth. The ore body is broad (up to 30m wide) and extends for 800m along strike.

The lithology units have been modelled using drilling data and consist of a north-south striking, sub-vertical sequence of tuffaceous and pelitic sediments and minor intercalated volcanics and intrusives bounded by massive komatiitic flow rocks. Mineralisation is oriented N-S within 3 shear systems. The extensive shearing (foliation and alteration makes identification of protoliths and grade correlations difficult.

Structural continuity of the shear systems is extensive. The grade continuity within the shears is less continuous and likely affected by changes in host lithology.

The deposit occurs on the eastern limb of a narrow NNW trending structure, the Bardoc-Broad Arrow syncline within the Bardoc Tectonic Zone. In this zone the sequence comprises highly deformed fault slice lenses of intercalated Archaean mafic and ultramafic volcanics and metasediments. At the deposit scale, lithologies include ultramafics, basalts, schists, dolerites and porphyrys.

All lithologies have been affected by pervasive foliation development but major shearing occurs in three zones: the Western Contact Shear, the 10,000E Shear and along the eastern sediment contact, the Excelsior Shear. In these areas, shearing and/or attendant alteration have resulted in deep troughs in the base of oxidation, particularly associated within the 10,000E Shear, where intense oxidation occurs to depths greater than 100 metres and up to 30 metres wide. Shear related troughs in oxidation are all steeply dipping and parallel to lithological contacts and foliation in both strike and dip.

A 1-5 metre thick white quartz vein fills the interpreted position of the Excelsior Shear for a strike of a least 300 metres, and a prominent line of surface pitting traces the northern and southern extensions of the Excelsior Shear for several kilometres. Cross faulting has been observed at outcrop scale with minor probable displacement. Air photo interpretation by Aberfoyle suggested a strong ENE trending cross-fracture set that may have produced offsets in the stratigraphy. Correlation of lithology and mineralised zones along strike suggested that any movement along these structures is minimal

Drilling Techniques

Recent drilling, post 2009, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter).

All BDC drill core is orientated by the drilling contractor with a down the hole Ace system. Core diameter is noted in the assay results table for DC assay results.

Historic drilling was completed by several mining companies prior to 2009 with the following drilling techniques::

- Hill Minerals – Reverse Circulation blade, or roller with minor hammer. Drill diameter unknown.
- Aberfoyle - Most of the Aberfoyle drilling was 4-3/4" reverse circulation roller drilling with minor R.C. hammer drilling in heavily quartz veined or fresher lithologies. Diamond drilling was NQ diameter and where the material drilled was intensely oxidised drilling was performed using a triple tube
- Halcyon – Drilling techniques unknown

Sampling and sub-sampling techniques

All BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag, and these are weighed when they are utilized for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database.

The BDC DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained.

BDC RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice, and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample.

The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings.

Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses

BDC Exploration results reported for drill core are half core taken from the right-hand side of the core looking down hole. Core is cut with an on-site diamond core saw.

All BDC RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database.

The BDC RC samples are sorted, oven dried, the entire sample is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge.

The BDC DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge.

BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. BDC inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser.

In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original

Sample Analysis Method

BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been SGS Australia and Bureau Veritas Australia which has two facilities in Kalgoorlie. The fire assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 40 or 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine.

The QC procedures are industry best practice. The laboratory is accredited and uses its own certified reference material. The laboratory has 2 duplicates, 2 replicates, 1 standard and 1 blank per 50 fire assays.

BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures BDC examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.

Estimation Methodology

It was evident that some of the estimation domains contained extreme outlier gold values. The moderately positively skewed gold distributions mean that conventional linear estimation methods, such as Ordinary Kriging ("OK") are very likely to produce over-smoothed block grade estimates. For this reason, it was decided to undertake grade estimation using the non-linear Localised Uniform Conditioning ("LUC") method.

The estimation panel size used was 8mE x 16mE x 10mRL. An SMU block size of 4mE x 8mN x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size is considered appropriate for the generally broad nature of mineralisation where a highly selective mining method (dictated by an even smaller SMU size) is considered unlikely. While the data spacing in areas other than near surface would be considered too wide for such a small block size if conventional linear estimation methods were used, EXG has used the LUC method, which is suited to estimating the grade distribution of smaller blocks using wide spaced data.

Cut-off Grades

The open pit-able MRE has been reported above a 0.3g/t Au cut-off and above an RL which represents 250m below surface.

Resource Classification

The geological model and continuity of the mineralisation is currently reasonably well understood The MRE is classified into indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. The classification is based on drill hole spacing, geological continuity and estimation quality parameters.

- Indicated – Areas with drill spacing up to approximately 30mE x 30mN and with reasonable confidence in the geological interpretation.
- Inferred – Areas with drill spacing in excess of 30mE x 30mN.

There is a high level of confidence in input data, geology and gold grades. At depth where drilling is more separated, confidence in geological and grade continuity is reduced and this is accounted for by having an inferred classification.

Mining Assumptions

This MRE has been undertaken on the assumption of open pit mining methods, the selection of SMU size was based on the scale of mining equipment likely to be used

Metallurgical Assumptions

The Excelsior deposit has been mined successfully between 1985 and 1992 with no metallurgical issues. EXG has conducted metallurgical test work on all ore types with recoveries in excess of 90% for all rock types.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

BARDOC SATELLITE PITS RESOURCE

Bulletin South

Geology and Geological Interpretation

The primary gold mineralisation at Bulletin South is predominantly associated with a quartz rich dolerite unit with a strongly porphyritic texture and associated second order structures. The gold mineralisation is associated with quartz, carbonate, sulphide alteration.

Whilst structure and primary gold mineralisation can be traced to the surface, depletion has occurred in the top 10-20m

Historical working and shafts exist within the area, detailed mapping and sampling of these workings and structural measurements from orientated diamond core drilling assists with the geological interpretation.

The geology of the mineralised system appears to be relatively simple however the gold distribution is more complex. It is understood that the continuity of mineralisation and volume controls are well established where drilling is at a nominal 40 x 20 m hole spacing.

The majority of the mineralisation of economic interest is associated with the (45-50-degree east dipping) ladder veins.

Drilling Techniques

Little information is available on the drilling techniques for the historical holes. However, holes have been drilled by Caris Corporation during 1984; by Getty Oil in 1984 and 1985 (using a Schramm T66H RC rig); by Aberfoyle during 1986, 1987; by MMC Management during 1993; by Goldfields during 1996 and 1998 (using a Schramm660 RC rig drilling 5.5" holes) and by Halycon during 2003 and 2004.

For (post 2011) EXG drilling, the RC drilling (Redmond Drilling – Schramm RC with cyclone attached) system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter).

All EXG drill core is orientated by the drilling contractor with a down the hole Ace system. Core diameter is noted in the assay results table for DC assay results.

Sampling and sub-sampling techniques

The Bulletin South open pit was mined up to April 1994. The drill hole database consists of historic (pre-2003) and EXG drilling data. The historical data is concentrated mostly within the part that has been mined, whilst the EXG drill holes extend below the pit.

EXG holes, 2 diamond drill holes and 34 RC holes were drilled at variable azimuths at dips of -60° to -50° to optimally test for potential mineralized zones, at a nominal spacing of 40m x 20m (N x E). There are in total 677 drill holes used in the resource estimate.

All RC recovered samples were collected and passed through a cone splitter. Prior to drilling, the drill hole locations were pegged using either contract surveyors or handheld GPS units. After drilling, all drill hole locations are picked up by surveyors using an RTK system. All drill holes greater than 80m drilled by EXG are down hole surveyed by contractors using industry standard digital tools.

All RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg -3.5kg sample was collected. Where the original 1m samples were not collected, nominal 4m composite samples were collected by spear sampling individual 1m composite intervals.

Industry standard work undertaken by EXG has in most instances supported the grades and widths indicated by historic drilling – there is a risk inherent in this MRE that the historic drilling data is to some unknown extent biased or not representative as this cannot be demonstrated due to lack of QA/QC information.

EXG Exploration results reported for drill core are half core taken from the right-hand side of the core looking down hole. Core is cut by contractors with a diamond core saw and all sampling is conducted by Excelsior geologists.

All EXG RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database.

The EXG RC samples are sorted, oven dried, the entire sample is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge.

The EXG DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge.

EXG RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. EXG inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser.

In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number.

The results of this field duplicate process are within acceptable limits, indicating that the RC sample results are repeatable.

For DC, no core duplicates (i.e., half core) have been collected or submitted.

The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned.

Sample Analysis Method

EXG has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been SGS Australia and Bureau Veritas Australia which has two facilities in Kalgoorlie. No complete details of the sample preparation, analysis or security are available for either the historic AC, DD or RC drilling results in the database.

The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 40g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine.

The QC procedures are industry best practice. The laboratory is accredited and uses its own certified reference material. The laboratory has 2 duplicates, 2 replicates, 1 standard and 1 blank per 50 fire assays.

EXG submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures EXG examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.

Estimation Methodology

A LUC estimation methodology has been used for Bulletin South. Block size for gold grade estimation was chosen in consultation with EXG and with due regard to data spacing, orebody geometry, and practical mining considerations. The estimation panel size used was 6mE-W x 10mN-S x 5mRL. An SMU block size of 2mE-W x 5mN-S x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size corresponds exactly to the current block size for grade control modelling and mining selection at the nearby and currently active Zoroastrian Central pit, conforms to the mining flitch height and is elongated in the approximately the same direction (north-south axis) as the trend of the mineralised envelope at Bulletin South.

Cut-off Grades

The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a 0.2 to 0.3g/t Au cut off which represents the mineralised shear modelled domains.

The MR has been reported above a 0.6g/t Au cut-off. This has been chosen to allow the application of modifying factors for the estimation of Mineral Reserves which indicate an economic cut-off of 0.9 to 1g/t Au.

Resource Classification

The geological model and continuity of the mineralised domain is currently well understood due to the GC drilling and mining exposure of the mineralised lodes. The MRE has been validated by “ground truth” methods whereby an estimate using only resource exploration drilling on a 40x20m collar spacing has been compared to a volume estimated by close spaced GC drilling. The results of this comparison confirm that the deeper MR areas estimated outside the grade control volumes can be expected to be representative of what will be defined for mining by the GC data to within +-10% contained metal.

The MRE has been classified as Measured, Indicated and Inferred based on the assessment of geological continuity, sample representivity and spacing and geostatistical summary parameters derived from the variogram models.

Mineralisation classified as Measured is within the primary porphyry domain with an average distance to sample data of 7-10m and an average slope of regression parameter of 0.72.

Mineralisation classified as Indicated is within the primary porphyry domain with an average distance to sample data of 12m and an average slope of regression parameter of 0.44.

Mineralisation classified as Inferred is within the primary porphyry domain or as isolated veins within the waste domain with an average distance to sample data of 18m and an average slope of regression parameter of 0.26.

Inferred material has been included in the waste domain to ensure that during potential mining these smaller occurrences are grade control checked for mineable volumes.

Mining Assumptions

This MRE has been undertaken on the assumption of open pit mining methods, the selection of SMU size was based on the scale of mining equipment currently in use at Zoroastrian Central.

Metallurgical Assumptions

Metallurgical test work was conducted by ALS Global, on one sample of representative material, in their Perth laboratory. Overall cyanide leaching of Au in a 24-hour period was 98.2% with 77% being recovered by gravity.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

MAYDAY NORTH

Geology and Geological Interpretation

he geology of the project comprises a northeast trending sequence of fine to medium grained volcanics dipping at 45^{o} to the northeast. Lithologies vary from gabbro in the west to foliated basalt in the east of the project area.

Primary gold mineralisation occurs in a tabular, brecciated zone adjacent to the sheared contact between an amphibole basalt and a chloritic basalt. Sulphide veining and brittle fracturing filled with silica, pyrite and arsenopyrite are the dominant hosts of mineralisation. The mineralised zone dips at approximately 45° northeast and has a typical thickness of 10-20m.

A deep weathering profile has developed over the Mayday North deposit, up to 60m deep in places. Distinct depletion and remobilisation of gold is evident within the oxide profile and as a result of this, substantial zones of flat lying, supergene gold mineralisation have formed above the primary mineralisation. A high grade portion of the supergene mineralisation was exploited in a small open pit.

Drilling Techniques

Drilling completed by numerous operators using RC and Diamond drilling. Upper portions of the deposit are well drilled on a 20m x 20m grid with wider spaced drilling at depth and further along strike. Drilling was dominantly at -60o towards the west or east. The majority of holes were downhole surveyed by various methods and collars located by contracted or mine surveyors.

All BDC drilling was HQ diamond, usually with a mud rotary or RC pre-collar and targeted deeper mineralisation. All Spitfire holes were downhole surveyed every 30m and collars located by contract surveyor

Sampling and sub-sampling techniques

All RC holes sampled on 1m intervals and split on-site to a smaller ~2.5kg sample for analysis. Goldfields analysed alternate samples and infill samples were subsequently tested once any anomalous zones were identified. Wet samples were scoop sampled. Some operators composited to 4m for initial analysis. 1m splits subsequently assayed if the composite interval was anomalous.

Assaying was generally by 50g Fire Assay utilising certified laboratories. BDC RC drilling was sampled and assayed every metre by 40g fire assay. The core samples were collected at nominated intervals by Bardoc Gold staff from core that was cut in half at the Bardoc Mine Site. All samples were oven dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm prior to being assayed for gold. Historic assay methods were not documented, however previous explorers used standard analysis methods from Genalysis, Analabs, Aurum and Kalgoorlie Assay Laboratories. All BDC pulverised samples were prepared for standard fire assay techniques using a 50g charge. A review of the QAQC data found analytical results to be satisfactory and suitable for inclusion in the resource estimation

BDC is of the opinion that the historic drilling was completed to industry standard by well-established drill companies. Sampling and assay procedures are described and are to industry standard. BDC RC drilling was assayed by fire assay and a system of QAQC checks implemented. For historic drilling (pre EXG) much of the QAQC data is unavailable and results are unknown.

Sample Analysis Method

For SPM drilling, analysis was by fire assay and atomic absorption spectrometry (AAS) finish at the Aurum laboratory in Perth. The analytical technique used by SPM approaches total dissolution of gold in most circumstances. SPM drilling included QAQC protocols including blanks, standards and duplicates. Results were satisfactory and supported the use of the data in resource estimation.

For historic RC and DD drilling, analytical procedures are not known;

Estimation Methodology

Grade estimation was by Ordinary Kriging for Au using Micromine software. The estimate was resolved into 5m (E) x 5m (N) x 5m (RL) parent cells that have been sub-celled at the domain boundaries for accurate domain volume representation. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, top-cuts were applied to some of the domains.

Cut-off Grades

The Mineral Resource reported by the Company is that portion of the resource model that is above 0.5g/t Au and is constrained to a depth of 200m below surface to reflect potential development by open pit mining. This satisfies the "reasonable prospects of eventual economic extraction" criteria for JORC compliance. Only Indicated and Inferred mineralisation that falls within this area is reported as Mineral Resource.

The currently defined extent of mineralisation above 2.0g/t Au does not warrant reporting of resources with potential for extraction by underground mining.

Resource Classification

The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. In part, the lodes

have been drilled down to a 15m x 15m spacing, on drill lines running east-northeast – west-southwest. To the north and south drilling is at greater spacing., commonly on 40m spaced drill sections.

Mining Assumptions

Portions of the deposit are considered to have sufficient grade and continuity to be considered for open pit mining. No mining parameters or modifying factors have been applied to the Mineral Resource.

Metallurgical Assumptions

Supergene mineralisation displayed good recoveries using conventional processing during the mining phase in 1999/2000. Preliminary metallurgical test work suggests a refractory component to the primary mineralisation. BDC completed a suite of bottle roll test and the refractory nature is supported and requires further test work.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

EL DORADO

Geology and Geological Interpretation

The mineralisation at El Dorado is situated on a north-northwest trending mafic/ultramafic package with sediments and felsic volcanics of the Black Flag Beds forming the footwall. Gold mineralisation is hosted predominantly in a 20m wide steeply east dipping shear zone, with quartz veining +/- arsenopyrite and has a northerly plunge.

The El Dorado mineralisation wireframes are for the most part interpreted to a 0.3g/t cut-off grade. The 0.3g/t threshold was chosen as this appears to be the threshold grade that defines any level of gold mineralisation as distinct from barren host rock.

All drilling was used to inform the interpretation, including RAB/Aircore. The RAB/Aircore data was however not used in the estimation. Lodes were generally interpreted on NE-SW sections when individual strings were digitised for each lode, snapping to existing drill holes. From these strings wireframes were produced for each individual lode. Closed out positions of the mineralised lodes along strike and depth were typically defined by a distance of approximately ½ of the surrounding drill spacing beyond the last drill hole. In total 3 mineralisation lodes were defined at El Dorado over a strike length of 340m.

Drilling Techniques

The El Dorado deposit has been defined by an extensive drill database, including some historical and considerable drilling completed by Excelsior and BDC.

Historic drill hole data has been validated against available reports, including WAMEX reports. Where possible hole locations were checked on ground but in most cases rehabilitation of the drill collar prohibited this. Early drilling, predominantly by Samantha has been included in the Mineral Resource Estimate as locations of mineralised intercepts are in agreement with later drilling which have surveyed collar locations and downhole surveys. Early holes were drilled on a local grid for which there was no established conversion to the GDA94 zone 51 system. A conversion to MGA coordinates was established by Excelsior Gold in 2014 where the local grid coordinates were obtained from the original drill logs (WAMEX reports) and used to define a 2-point grid transformation.

For BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter). All

Bardoc Gold drill core was orientated by the drilling contractor. Holes are down hole surveyed usually every 18m(core), 30m(RC) down-hole. All collars are picked up by a surveyor.

RAB drilling makes up about 5% of the historic drilling and RC the other 95%. There are several campaigns of historic drilling between 1984 and 1995. These holes are sometimes without documentation of the rig type and capability, core size, sample selection and handling. RAB drilling was used to assist with geological and mineralisation wireframing and was excluded from the resource estimation process.

Sampling and sub-sampling techniques

All RC holes sampled on 1m intervals and split on-site to a smaller ~2kg sample for analysis. Goldfields analysed alternate samples and infill samples were subsequently tested once any anomalous zones were identified. Wet samples were scoop sampled. Some operators composited to 4m for initial analysis. 1m splits subsequently assayed if the composite interval was anomalous.

Assaying was generally by 50g Fire Assay utilising certified laboratories. BDC RC drilling was sampled and assayed every metre by 40g fire assay. The core samples were collected at nominated intervals by Bardoc Gold staff from core that was cut in half at the Bardoc Mine Site. All samples were oven dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm prior to being assayed for gold. Historic assay methods were not documented, however previous explorers used standard analysis methods from Genalysis, Analabs and Kalgoorlie Assay Laboratories. All BDC pulverised samples were prepared for standard fire assay techniques using a 40g charge. A review of the QAQC data found analytical results to be satisfactory and suitable for inclusion in the resource estimation

BDC is of the opinion that the historic drilling was completed to industry standard by well-established drill companies. Sampling and assay procedures are described and are to industry standard. BDC RC drilling was assayed by fire assay and a system of QAQC checks implemented. For historic drilling (pre EXG) much of the QAQC data is unavailable and results are unknown.

Estimation Methodology

Grade estimation was by Ordinary Kriging for Au using Micromine software. The estimate was resolved into 5m (E) x 5m (N) x 5m (RL) parent cells that have been sub-celled at the domain boundaries for accurate domain volume representation. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, top-cuts were applied to some of the domains.

Cut-off Grades

The Mineral Resource reported by the Company is that portion of the resource model that is above 0.5g/t Au and is constrained to a depth of 150m below surface to reflect potential development by open pit mining. This satisfies the "reasonable prospects of eventual economic extraction" criteria for JORC compliance. Only Indicated and Inferred mineralisation that falls within this area is reported as Mineral Resource.

A resource below 200m below surface is reported at a cut-off grade of 2.00g/t, which reflects the economics of possible underground mining. This satisfies the "reasonable prospects of eventual economic extraction" criteria for JORC compliance. Only Indicated and Inferred mineralisation that falls within this area is reported as a Mineral Resource. The resource has been depleted for prior mining.

Resource Classification

The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. In part, the lodes have been drilled down to a 15m x 15m spacing, on drill lines running east-northeast – west-southwest. To the north and south drilling is at greater spacing.

In part, the deposit is adequately drilled to have potentially been defined as higher confidence classification using only drilling density as a criteria. However, a number of issues remain unresolved with the base data and geological/structural models, including rock bulk density is assumed, no actual measurements exist from El Dorado. Only two diamond core hole has been drilled at depth in the northern part of the resource, further core holes are required to confirm geological and structural interpretation assumptions.

Mining Assumptions

No modifying factors were applied to the reported Mineral Resources. Parameters including geotechnical, mining dilution, ore loss and metallurgical recoveries will be considered during the mining evaluation of the project. The reported Mineral Resources have had some minor unquantified historical minor underground mining.

Metallurgical Assumptions

Metallurgical test work has not been done on El Dorado mineralization.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

TALBOT NORTH

Geology and Geological Interpretation

Talbot North has three lithologies which strike NW and dip 65o to 80o to the south west. From west to east these are shale, basalt and ultramafic. The western sediments are part of the Black Flag Beds. The basalt varies in width from about 90m in the south to 40m in the north. The basalt is separated by two shale units of varying width between 30cm to 10m. Mineralisation lies almost entirely within the basalt, being both lithologically and structurally controlled. Mineralisation along the western contact is associated with a contact parallel quartz vein in the footwall. A pervasive chlorite-carbonate alteration with arsenopyrite is associated with the gold mineralisation. NE striking structures appear to dextrally offset the mineralisation in places and may increase gold grades locally.

Drilling Techniques

The Talbot North deposit has been defined by an extensive database of drilling completed by historic operators and Excelsior Gold. Historic digital data has been verified against hardcopy records and ground truthed where possible. The majority of historic data completed by Pancontinental and Goldfields. For EXG and BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter). All BDC drill core is orientated by the drilling contractor. Holes are down hole surveyed usually every 30m downhole and deeper holes are gyro surveyed by a contract surveyor. All collars are picked up by a mine or contract surveyor.

Sampling, sub-sampling techniques and Analysis Method

All RC holes sampled on 1m intervals and split on-site to a smaller ~2kg sample for analysis. Goldfields analysed alternate samples and infill samples were subsequently tested once any anomalous zones were identified. Wet samples were scoop sampled. Some operators composited to 4m for initial analysis. 1m splits subsequently assayed if the composite interval was anomalous.

Assaying was generally by 50g Fire Assay utilising certified laboratories. BDC RC drilling was sampled and assayed every metre by 40g fire assay. NQ2 core sawn in half and one half sampled to zones of geological interest. Assays of core generally by 50g Fire Assay. A review of the QAQC data found analytical results to be satisfactory for inclusion in the resource estimation

BDC is of the opinion that the historic drilling was completed to industry standard by well-established drill companies. Sampling and assay procedures are described and are to industry standard. BDC RC drilling was assayed by fire assay and a system of QAQC checks implemented. For historic drilling (pre EXG) much of the QAQC data is unavailable and results are unknown.

Estimation Methodology

Grade estimation was by Ordinary Kriging for Au using Micromine software. The estimate was resolved into 5m (E) x 10m (N) x 5m (RL) parent cells that have been sub-celled at the domain boundaries for accurate domain volume representation. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, top-cuts were applied to some of the domains.

Cut-off Grades

The Mineral Resource reported by the Company is that portion of the resource model that is above 0.4g/t Au and is constrained to a depth of 200m below surface to reflect potential development by open pit mining. This satisfies the "reasonable prospects of eventual economic extraction" criteria for JORC compliance. Only Indicated and Inferred mineralisation that falls within this area is reported as Mineral Resource. The reported Mineral Resources have been depleted to account for previous mining.

The currently defined depth extent of mineralisation does not warrant reporting of resources with potential for extraction by underground mining.

Resource Classification

The classification attempts to categorise areas of the block model to reflect confidence in the geological framework and estimation quality. The classification takes account of confidence in the geological interpretation and sample density. In order to avoid a mosaic style of classification, solid wireframes were constructed to encompass areas considered to adequately fulfil the requirement to be classified as either indicated or inferred:

Indicated - Areas with drill spacing up to approximately 40mE x 40mN with reasonable confidence in the geology.

Inferred – Areas with drill spacing in excess of 40mE x 40mN. These are less well informed regions of the model and generally only receive an estimated grade on the third estimation run with relaxed estimation parameters.

Mining Assumptions

No modifying factors were applied to the reported Mineral Resources. Parameters including geotechnical, mining dilution, ore loss and metallurgical recoveries will be considered during the planned mining evaluation of the project.

Metallurgical Assumptions

BDC has not conducted metallurgical test work on mineralisation at Talbot North. It is noted that previous open pit mining at Talbot North has seen 307kt @ 1.66g/t Au for 16.4koz Au of ore mined and treated through the nearby Paddington Mill, recoveries from this ore parcel are unknown.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

DUKE NORTH

Geology and Geological Interpretation

The local stratigraphy, from west to east comprises a package of sediments, mafics and ultramafics. The package is steeply dipping to the east or north east. The central mafic is a layered dolerite, up to 30m wide with obvious variations in pyroxene:plagioclase ratio as well as grainsize and leucoxene percentage. The dolerite is the primary host to mineralisation. The dolerite is fault repeated south of the resource area and attains a width of ~350m north of the resource area. The footwall sediments comprise an extensive sequence of siltstones and shales. The immediate hangingwall of the dolerite is defined by a narrow (10m-15m wide) chert horizon, after graphitic shale, which is variably mineralised. West of the chert is a thick sequence (>500m) of barren olivine cumulates and komatiites.

All drilling was used to inform the interpretation, including RAB although the RAB holes were not used in the estimation. Lodes were generally interpreted on NE-SW drill sections where individual strings were digitised for each lode, snapping to existing drill holes. From these strings wireframes were produced for each individual lode. Closed out positions of the mineralised lodes along strike and depth were typically defined by a distance of approximately ½ of the surrounding drill spacing beyond the last drill hole. In total 3 lodes were defined.

Drilling Techniques

Drilling completed by numerous operators using RC and Diamond drilling. Upper portions of the deposit are well drilled on a 20m x 20m grid with wider spaced drilling at depth and further along strike. Drilling was dominantly at -60o towards the west or east.

BDC is of the opinion that the historic drilling was completed to industry standard by well-established drill companies. Sampling and assay procedures are described and are to industry standard. All RC drilling was assayed by fire assay and a system of QAQC checks implemented by BDC. QAQC procedures for the Diamond hole drilled by Aurion Gold is unknown. For historic drilling (pre EXG) much of the QAQC data is unavailable and results are unknown.

Sampling, sub-sampling techniques and Analysis Method

All RC holes sampled on 1m intervals and split on-site to a smaller ~2kg sample for analysis. Goldfields analysed alternate samples and infill samples were subsequently tested once any anomalous zones were identified. Wet samples were scoop sampled. Some operators composited to 4m for initial analysis. 1m splits subsequently assayed if the composite interval was anomalous.

Assaying was generally by 50g Fire Assay utilising certified laboratories. Excelsior RC drilling was sampled and assayed every metre by 40g fire assay. NQ2 core sawn in half and one half sampled to zones of geological interest. Assays of core generally by 50g Fire Assay. A review of the QAQC data found analytical results to be satisfactory for inclusion in the resource estimation

BDC is of the opinion that the historic drilling was completed to industry standard by well-established drill companies. Sampling and assay procedures are described and are to industry standard. BDC RC drilling was assayed by fire assay and a system of QAQC checks implemented. QAQC procedures for the Diamond hole drilled by Aurion Gold are unknown. For historic drilling (pre EXG) much of the QAQC data is unavailable and results are unknown.

Estimation Methodology

Localised Uniform Conditioning (LUC) was used for Duke North where open pit mining is the likely extraction method. Composited samples were used for grade interpolation, 1m width at Duke North. Composite grade top cutting was completed on a domain basis based on disintegration analysis of the probability curve and visual inspection of the histogram. Variography was used to determine directions of grade continuity, supported where possible by geological evidence. Ellipsoidal search parameters were applied on a domain basis to align with the mineralisation. The LUC panel size used is 8mE x 10mN x 5mRL and SMU block sizes were 2mE x 5mN x 2.5mRL. The SMU sizes were selected based on the geometry of the mineralisation and the likely degree to which selective mining could be achieved given the visual appearance of mineralisation. Estimation used four sectors with a maximum of 6 samples per sector and a minimum of 6 samples and maximum of 5 samples per drill hole. Estimation search parameters including search distance and minimum number of samples were relaxed on subsequent runs.

Cut-off Grades

The Mineral Resource reported by the Company is that portion of the resource model that is above 0.4g/t Au and is constrained to a depth of 200m below surface to reflect potential development by open pit mining. This satisfies the "reasonable prospects of eventual economic extraction" criteria for JORC compliance. Only Indicated and Inferred mineralisation that falls within this area is reported as Mineral Resource. Historic underground mining has taken place at the deposit, the extents of which are unknown, and as a result the resource has not been depleted for this mining.

The currently defined depth extent of mineralisation does not warrant reporting of resources with potential for extraction by underground mining.

Resource Classification

The classification attempts to categorise areas of the block model to reflect confidence in the geological framework and estimation quality. The classification takes account of confidence in the geological interpretation and sample density. In order to avoid a mosaic style of classification, solid wireframes were constructed to encompass areas considered to adequately fulfil the requirement to be classified as either indicated or inferred:

Indicated - Areas with drill spacing up to approximately 20mE x 20mN with reasonable confidence in the geology.

Inferred – Areas with drill spacing in excess of 20mE x 20mN with lower geological confidence.

Mining Assumptions

No modifying factors were applied to the reported Mineral Resources. Parameters including geotechnical, mining dilution, ore loss and metallurgical recoveries will be considered during the mining evaluation of the project.

Metallurgical Assumptions

Metallurgical test work has not been done on Duke North mineralization.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

SOUTH CASTLEREAGH

Geology and Geological Interpretation

The primary gold mineralisation in the Castlereagh South area is predominately associated with a 10-20m wide shear zone and associated second order structures adjacent to an ultramafic and mafic contact. This mineralisation is associated with intense shearing and quartz, sericite, carbonate, sulphide alteration. The development of possible stockworks at intersections of structures is also interpreted. Whilst structures and primary gold mineralisation can be traced to the surface depletion has occurred in the top 20-30m and again through the transitional zone. Sub-horizontal supergene enrichment blankets occur throughout the regolith. Historical workings and shafts exist within the area. Detailed mapping and sampling of these workings and structural measurements forms the basis of the geological interpretation. The Castlereagh South mineralisation wireframes are for the most part interpreted to a 0.3g/t cut-off grade. The 0.3g/t threshold was chosen as this appears to be the threshold grade that defines any level of gold mineralisation as distinct from barren host rock.

Drilling Techniques

The South Castlereagh deposit has been defined by an extensive drill database, including some historical and considerable drilling completed by Excelsior. Historic digital data has been verified against hardcopy records and ground truthed where possible. For BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter). All BDC drill core is orientated by the drilling contractor. Holes are down hole surveyed usually every 30m downhole and deeper holes are gyro surveyed by a contract surveyor. All collars are picked up by a mine or contract surveyor.

RAB drilling makes up about 30% of the historic drilling and RC the other 70%. There are several campaigns of historic drilling between 1983 and 2012. These holes are sometimes without documentation of the rig type and capability, core size, sample selection and handling. RAB drilling was used to assist with geological and mineralisation wireframing and was excluded from the resource estimation process.

Sampling, sub-sampling techniques and Analysis Method

All RC holes sampled on 1m intervals and split on-site to a smaller ~2kg sample for analysis. Goldfields analysed alternate samples and infill samples were subsequently tested once any anomalous zones were identified. Wet samples were scoop sampled. Some operators composited to 4m for initial analysis. 1m splits subsequently assayed if the composite interval was anomalous.

Assaying was generally by 50g Fire Assay utilising certified laboratories. BDC RC drilling was sampled and assayed every metre by 40g fire assay. NQ2 core sawn in half and one half sampled to zones of geological interest. Assays of core generally by 50g Fire Assay. A review of the QAQC data found analytical results to be satisfactory for inclusion in the resource estimation

BDC is of the opinion that the historic drilling was completed to industry standard by well-established drill companies. Sampling and assay procedures are described and are to industry standard. BDC RC drilling was assayed by fire assay and a system of QAQC checks implemented. For historic drilling (pre EXG) much of the QAQC data is unavailable and results are unknown.

Estimation Methodology

Grade estimation was by Ordinary Kriging for Au using GEOVIA Surpac™ software. The estimate was resolved into 2m (E) x 10m (N) x 10m (RL) parent cells that have been sub-celled at the domain boundaries for accurate domain volume representation. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade

histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, top-cuts were applied to some of the domains.

Cut-off Grades

The Mineral Resource reported by the Company is that portion of the resource model that is above 0.5g/t Au and is constrained to a depth of 200m below surface to reflect potential development by open pit mining. This satisfies the "reasonable prospects of eventual economic extraction" criteria for JORC compliance. Only Indicated and Inferred mineralisation that falls within this area is reported as Mineral Resource. Historic underground mining has taken place at the deposit, the extents of which are unknown, and as a result the resource has not been depleted for this mining.

The currently defined depth extent of mineralisation does not warrant reporting of resources with potential for extraction by underground mining.

Resource Classification

The classification attempts to categorise areas of the block model to reflect confidence in the geological framework and estimation quality. The classification takes account of confidence in the geological interpretation, sample density and available bulk density information.

Indicated - Areas with drill spacing up to approximately 15-25mE x 15-25mN with reasonable confidence in the geology.

Inferred – Areas with drill spacing in excess of 25mE x 25mN. These are less well informed regions of the model and have lower levels of geological confidence than Indicated areas.

Mining Assumptions

No modifying factors were applied to the reported Mineral Resources. Parameters including geotechnical, mining dilution, ore loss and metallurgical recoveries will be considered during the mining evaluation of the project.

Metallurgical Assumptions

Metallurgical test work has not been done on South Castlereagh. The South Castlereagh Deposit is located 500m south, in similar rock types and mineralisation styles, of the Castlereagh Open Pit excavated by Excelsior Gold Ltd in 2015. The gold recoveries from the Castlereagh Open Pit through the Paddington Mill owned by Norton Goldfields were in excess of 90%.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

MULWARRIE

Geology and Geological Interpretation

The Mulwarrie Gold Project is located 150 km north west of Kalgoorlie in the Ularring District of the North Coolgardie Minerals Field. The project is secured by 2 contiguous tenements, M30/119 and M30/145, 10kms north west of the Davyhurst Mining centre. The two tenements lie within a 10km wide greenstone belt which forms the northwest extension of the Coolgardie Line. The structurally dominant north trending Mt. Ida fault lies approximately 4km east of the Mulwarrie Mining Centre. Most of the lithologies within this greenstone belt are steeply dipping and well foliated along a NNW/SSE trend.

Grades of metamorphism at Mulwarrie are generally higher than in the Kalgoorlie area with hornblende – biotite – plagioclase amphibolites common. Hornblende is diagnostic of the amphibolite facies and at Mulwarrie metamorphism has peaked at mid to upper amphibolite facies.

Gold mineralisation has been found in two distinct settings at Mulwarrie. Firstly, in narrow shear zones with only minor or no quartz veining, with limited calcsilicate alteration haloes and with erratic but occasionally high gold values. The zones of mineralisation may be up to 2 metres wide but are generally less than 50 cm. They are conformable to the stratigraphy and foliation. The second and most important type of gold mineralisation is associated with quite flat dipping often massive quartz reefs with strong diopside, biotite, epidote and carbonate alteration haloes. Pyrrhotite and pyrite development is also strong within and adjacent to the quartz reefs. Minor amounts of chalcopyrite, galena and sphalerite are also associated with gold mineralisation. Gold is found within quartz reefs, within biotite selvages to the quartz veins and also in the associated country rocks. In MWRC 628 at 9373N/9879E (local grid coordinate) an intersection of 15 metres @ 9.54 g/t Au from 72 – 87 metres drill depth occurs within quartz veins having abundant sulphide mineralisation combined with diopside, biotite and silica alteration. Mineralised shoots appear to plunge 30- 45 degrees to the south (125°magnetic).

Drilling Techniques

Drill sample data has been collected by various exploration companies between 1983 and 1996. Drilling programs included Rotary Air Blast (RAB), and RC drilling techniques, the current historical database includes 453 holes for a total of 14,321m. Spitfire conducted 3 phases of drilling, June 2017 (24 RC holes for 2,915m and 1 Diamond drill hole of 99.6m, August 2017 (24 RC holes for 2,780m) and finishing with November/December 2017 (27 RC holes for 3,517m).

The spacing of drill hole collars is variable. The gold mineralisation has generally been defined by drill holes on a cross-section line spacing, roughly perpendicular to the strike of the mineralised zones between 10m and 25m apart.

Sampling, sub-sampling techniques and Sample Analysis

Sample information used in resource estimation was derived from both RC and diamond core drilling. The drill samples have been geologically logged and sampled for lab analysis. Minor sample recovery problems were noted in the historical reports when drilling encountered faulted/fractured ground. No sample recovery problems were encountered with the recent diamond & RC drilling. The Spitfire 2017 RC drilling was completed using a face sampling hammer with 5.75 inch bit. The recent diamond hole was drilled HQ to 70.7m & the remainder NQ2 to 99.6m. All core was orientated from 17MWDD001.

Estimation Methodology

Grade estimation was by Ordinary Kriging for Au using GEOVIA Surpac™ software. The estimate was resolved into 1m (E) x 5m (N) x 5m (RL) parent cells that had been sub-celled at the domain boundaries for accurate domain volume representation. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, top-cuts were applied for gold to 17 of the 21 domains.

Cut-off Grades

Quartz vein boundaries typically coincide with anomalous Au which allows for geological continuity of the mineralised zones. All gold-bearing vein (and grade) contact models were built in Leapfrog™ Geo software and exported for use as domain boundaries for the block model.

Resource Classification

The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. The Mulwarrie Mineral Resource has been classified as Inferred according to JORC 2012 primarily due to a lack of oriented diamond core holes to assisting in supporting the structural model. In addition, very limited bulk density data is available to date.

Mining Assumptions

No modifying factors were applied to the reported Mineral Resources. Parameters including geotechnical, mining dilution, ore loss and metallurgical recoveries will be considered during the planned mining evaluation of the project. The reported Mineral Resources have been depleted to account for previous mining.

Metallurgical Assumptions

Metallurgical tests of selected RC samples including bottle roll cyanidation leach tests and rate of cyanidation tests were completed by Ammtec in 1986 and 1987 for Pancontinental. More recently bottle roll cyanidation leach tests prior to trial mining using a mobile gravity/CIL plant were also carried out by Goldfield Argonaut in 2015. Petrological examination of selected samples was also completed at the end of trial mining. In September 2107 2 composite samples were created by Nagrom from ore grade RC samples collected from East Lode intercepts.

One composite was created from sulphidic quartz lode ore (semi massive pyrite & pyrrhotite in quartz), the other composite was created from biotite altered & sheared basalt containing disseminated pyrite & pyrrhotite also derived from ore grade RC samples collected from East Lode intercepts.

A standard grind size was used of P80 (0.106mm). Initial test work has produced encouraging results and indicates that both the quartz lode & altered basalt ore is not refractory in nature. 24-hour bottle roll tests returned 96.6% recovery from the quartz lode composite and 91% recovery from the sulphide bearing altered basalt composite.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

LOCHINVAR

Geology and Geological Interpretation

Lochinvar mineralisation is present with basalt and ultramafics rocks. Foliation and bedding strike north- south with generally steep dips. Strike-slip shearing followed by late, mainly WNW-trending cross faulting of the main structural feature. Mineralisation is mostly concentrated within a central zone of intense alteration. This zone of quartz-fuchsite-carbonate schists is the focus of very intense oxidation to in excess of 100m depth.

The geology of the systems and the gold distribution are complex. As such the company has not reported measured resources regardless of drill and sample density. The overall understanding of the mineralisation and controlling factors is well understood from the mapping and recent drilling of RC and DC holes. Geological and structural continuity is demonstrated in the available data sets.

The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole surrey data. Hence EXG has twinned historical holes to confirm historical results and location of the mineralisation. This twinning has confirmed the historical data and combined with the new RC and DC drilling, high confidence in the geology and mineralisation is developed to support the JORC classified resource estimate.

Different interpretations of the gold mineralisation wireframes have been undertaken to assess the influence on mineral resource estimation and mining economics. This work demonstrated that a possible +/- 10% difference exists between different lode interpretations. Where geological interpretation has a high degree of uncertainty it is classified as inferred regardless of modelling parameters.

Drilling Techniques

All assays and resources reported in this announcement are based on information collected from either RC or DC drilling. No RAB or open hole percussion holes were included in grade estimations. The RC drilling system employed by EXG uses a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter). All drill core is orientated by the drilling contractor with a down the hole Ace system. Historical drilling is similar to that described above, limited core orientation data collected.

Sampling and sub-sampling techniques

The mineralization was sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on variable drilling spacing. The sampling, collection and sub-setting methods are at or above Industry Standard Practise (explained further below). The holes were drilled to optimally intersect the targeted mineralized zones. The majority of holes were drilled with a dip of -60° with azimuths of either 90° or 270° magnetic (at Bulletin South, -60° dip towards 040° or 220° magnetic was used). It is noted that drilling has failed to adequately test for potential cross cutting structures that may or may not influence gold distribution.

The drill hole locations are considered sufficient to provide for the spatial spread of samples across multiple mineralized zones and different rock types. All EXG RC samples were collected and passed through a cone splitter. Diamond core was HQ or NQ2 in size and drilled with a dip of -60° with azimuths of either 90° or 270° magnetic. Holes positions were surveyed by a qualified surveyor and holes were down hole surveyed by contractors. Instruments used were No records exist for how the diamond core drilled was collected, handled or sampled

All RC drilling by EXG was collected on one metre down hole intervals. The recovered samples were passed through a cone and/or a riffle splitter to collect a nominal 2.5kg – 3.5kg sample before having a 50g fire assay. Historic sampling had every 2nd metre submitted for assay and samples either side submitted if anomalous results were returned from the initial sampling. The sample was then prepared by standard fire assay techniques with a

20 to 50g charge. DC was geologically logged and sampled to lithological contacts or changes in the nature of mineralisation. Maximum length was 1m with a minimum sample length of 0.25m, half core was sampled. Assays from EXG drilling used 50g Fire Assay. Selected drill holes had pieces of core from ore and waste zones tested for their SG by the weight in water and weight in air method.

EXG DC was half sampled. The core was cut along its' long axis and the right hand side of the core, looking down the hole, was sampled. For historical drilling, no information is available for how the diamond core was sampled.

All RC drilling by Excelsior was collected on one metre down hole intervals. The recovered samples were passed through a cone and/or a riffle splitter to collect a nominal 2.5kg – 3.5kg sample. Historical drilling was riffle or cone split. No mention is made in the historical data of how wet samples were collected but logging suggests only minimal water was intersected occasionally. Wet samples drilled by EXG have been recorded in the database and were sampled through the cone splitter.

The sample preparation technique is appropriate for the style and type of mineralisation encountered within the samples collected. Review of the historical data confirms that the work undertaken is of sufficient quality to estimate the applicable JORC resource level.

EXG RC samples submitted to the laboratory are sorted and reconciled against the submission documents. Excelsior inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in

sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per

50 fire assays. The laboratory also uses barren flushes on the pulveriser. No information is available for historic drilling, however, the position and tenor of gold mineralisation has been confirmed

Samples are collected in uniquely pre-numbered calico bags. For EXG, in the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. For DC, no core duplicates (i.e. half core) have been collected or submitted. No historical information is available from old data, however, EXG has twinned specific historical holes within each resource to confirm the old drilling results.

For EXG, the sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned. Whilst no historical information is available EXG believes that the sample size was standard industry practice being collected by companies with known quality control methods and procedures. The samples collected by both EXG and previous operators are sufficient for the type, style, thickness and consistency of mineralisation.

Sample Analysis Method

The primary assay method used (Fire Assay by certified assay laboratories in Kalgoorlie and Perth) is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style.

Estimation Methodology

Block models were estimated using Ordinary Kriging with Micromine software. Estimation parameters were determined using QKNA analysis on selected blocks for each mineralisation type. Estimations were run within the mineralised wireframes using the assay data.

Block sizes (10mN x 2mE x 4mRL) were chosen to represent the most likely selective mining units when extraction is by open pit method utilizing a traditional open pit mining taking into account orientation and dimensions of modelled lodes.

Cut-off Grades

A nominal lower-cut off grade of 0.6g/t Au was used for modelling based on geological and grade continuity mindful of possible economic breakeven grades. Recent pit optimisation studies suggests economic cut-off grades are in the order of 0.5 to 0.85 g/t Au

Resource Classification

Initial indicative classifications are based on a set of variable parameters and search ellipsoids that become more “relaxed” with each pass. These parameters and search ellipsoids are unique to individual lodes and domains within each deposit and are based on geostatistical and geological analysis. The final criteria for each run are decided after comparing the effects of changing each of the individual variables.

Mining Assumptions

Resources are reported at a cut-off grade of 0.6g/t Au to reflect possible economic grades via traditional open pit mining and processing via a 1mtpa (or larger) processing plant.

Minimal mining widths of 2metres are assumed

Metallurgical Assumptions

Diamond core test work has been carried out for this resource estimate.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

NORTH KANOWNA STAR

Geology and Geological Interpretation

The North Kanowna Star ("NKS") project is located within the Boorara Domain of the Kalgoorlie Terrane. The stratigraphic succession is equivalent to the Black Flag Beds and is intruded by granitoids and porphyries in the region. An interpreted north-north-westerly trending shear zone passes through the tenement and is manifested in the field by a series of narrow shears. These shears are best developed at the contacts between felsic tuffaceous units and the mafic gabbroic and basaltic lithologies.

The main prospect is Wedge-Perseverance which comprises multiple parallel zones of mineralisation within a corridor approximately 600m long hosted within mafic volcanic and felsic lithologies. The prospect forms a flexure trending NNE at the south, through to NNW at the north of the prospect.

Gold mineralisation in the area is mainly hosted by the felsic lithologies near the sheared contacts with the mafic rock types. Typically a 150o to 160o striking and moderate (60o to 70o) east dipping quartz vein set sub-parallels the regional foliation and is intersected in shallow costeans and trenches. The presence of NNE trending, quartz-feldspar porphyry intrusions is also considered to be an important control.

Weathering extends to a depth of 50m to 75m below surface and mineralisation is typically depleted for 15m to 20m below surface.

Drilling Techniques

Exploration at the NKS project was carried out by various operators commencing in 1985 with in excess of 1,000 drill holes completed throughout the project tenements. Previous operators included Finders Gold Limited, Pancontinental Mining Limited, Windsor Resources Limited and most recently, Strategic Mining Projects Pty Ltd ("SPM"). SPM completed 58 holes for 3,716m.

Resource drilling throughout the deposit was mostly reverse circulation ("RC") drilling angled at -60o to 250o. Holes were drilled at 10-20m spacings on 25m spaced section lines. Samples in mineralised zones were collected at 1m or 2m intervals. A total of 196 RC and 5 diamond drill holes were used in the resource estimate for a total of 13,103m of drilling.

Rotary air blast ("RAB") and air core ("AC") drilling is included in the database but was excluded from the estimate.

For drilling completed by SPM, collars were located after drilling using hand-held GPS. No downhole surveys were carried out due to the shallow nature of the drilling.

For historic drilling, collar surveys were reportedly completed by contract surveyors using a Differential GPS system. The earliest drilling programs appear to have been drilled on a local grid with subsequent transformations to MGA. A significant number of historic holes were located in the field by SPM, confirming the historic survey information.

Sampling and sub-sampling techniques

For SPM RC drilling, a face-sampling hammer was used with samples collected at 1m intervals. Samples were composited to 4m intervals for initial analysis, and anomalous samples were then submitted as 1m intervals. Samples were collected through a rig-mounted cone splitter. Samples were visually assessed for recovery and were kept dry throughout the mineralised zones.

The historical RC drilling was sampled at 1m or 2m intervals and split using free standing riffle splitters.

Diamond core was sampled to geological intervals or on a 1 metre basis from half core cut with a diamond saw.

Sample Analysis Method

For SPM drilling, whole samples were crushed then pulverised and analysed for gold at a contract laboratory using a fire assay technique. QAQC protocols were in place for the drilling programs and has confirmed the quality of the sampling and assaying.

The majority of historic RC and diamond drilling was assayed at contract laboratories. Assay methods included aqua regia and fire assay. QAQC data was not available for the historic drilling, but the tenor and geometry of mineralisation is consistent with the recent SPM results.

Estimation Methodology

The deposit was estimated using inverse distance squared ("ID2") grade interpolation of 2m composited data within wireframes prepared using 0.4g/t Au envelopes. Weathering surfaces were not used to constrain the estimates, but were applied for reporting of material types.

Interpolation parameters were based on the geometry of each zone and the drill hole spacings within them. A first pass search range of 40m was used with a minimum of 10 samples and a maximum of 40 samples. The first pass estimate informed 67% of the blocks. The search range was doubled for the second pass which filled the remainder of the blocks. A high grade cut of 11g/t was used for all domains.

The block dimensions used in the model were 10m NS by 5m EW by 5m vertical with sub-cells of 2.5m by 1.25m by 1.25m.

No information on bulk density was provided by SPM. Densities typical of weathering profiles in mafic lithologies were applied. Values of 1.8t/m3 for Oxide, 2.2t/m3 for Transition and 2.7t/m3 for Fresh mineralisation were applied to the estimate.

Cut-off Grades

The shallow, sub-cropping nature of the deposit suggests potential for open pit mining. As such, the Mineral Resource has been reported at a 0.5g/t Au lower cut-off to reflect assumed exploitation by open pit mining.

The project is considered to have reasonable prospects for eventual economic extraction of parts of the Mineral Resource due to the close proximity of other operating gold mines and the favourable gold price.

Mineral Resource Classification

Resource classification was considered on the basis of drill hole spacing and continuity of mineralisation. The majority of zones showed poor continuity of mineralisation, even where close spaced drilling was present. However, portions of each of the three main zones had strong mineralisation which had been drilled at spacings of 25m by 10-15m. These areas

showed reasonable continuity of mineralisation and predictable geometry and were classified as Indicated Mineral Resource.

Outside of this area, the tenor of mineralisation was lower with poor continuity and was classified as Inferred Mineral Resource. Inferred resource was extrapolated to a distance of up to 20m past drill hole intersections.

Mining Assumptions

No modifying factors were applied to the reported Mineral Resource estimate. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered during the planned mining evaluation of the project.

Metallurgy

No information was located on the metallurgical characteristics of the deposit. The majority of the Mineral Resource is oxide and transitional and it is likely that metallurgical recoveries will be excellent. The primary mineralisation is associated with quartz veining and pyrite with no indications of refractory sulphide mineralisation.

Modifying Factors

No modifying factors were applied to the reported Mineral Resource estimate. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered during the planned mining evaluation of the project.

NERRIN NERRIN

Geology and Geological Interpretation

The lithologies encountered in the area comprise micaceous shale and gritty siltstones. East of the shale is a heavily weathered dolerite body which is narrow to the south and widens considerably to the north. Moderate milky quartz veining is present within the lithology. The eastern contact between dolerite and ultramafics is intensely sheared and, near surface, the shear zone is usually silicified, trends north-south and dips steeply to the west with a mapped thickness of 2m. To the east of the shear, the unit is comprised of talc carbonate, talc chlorite schist and serpentinite ultramafics. Adjacent to the shear, the unit has been intensely altered to sericitic pale yellow/brown clays.

All drilling, apart from excluded RC holes by Julia Mines, was used to inform the interpretation, including grade control and RAB/Aircore. The RAB/Aircore data was however not used in the estimation. Lodes were generally interpreted on E-W sections when individual strings were digitised for each lode, snapping to existing drill holes. From these strings wireframe were produced for each individual lode. Closed out positions of the mineralised lodes along strike and depth were typically defined by a distance of approximately ½ of the surrounding drill spacing beyond the last drill hole.

Drilling Techniques

The Nerrin Nerrin deposit has been defined by an extensive drill database, including some historical and considerable drilling completed by Excelsior and BDC. Historic drill locations have been validated by BDC with cross checking of spatial position on historic plans and cross-sections. Where possible hole locations were checked on ground but in most cases rehabilitation of the drill collar prohibited this. For much of the historic drilling there is no detailed downhole survey data and holes are plotted at a (usually) nominal direction of 90o and dip of -60o. Early drilling, predominantly by Julia Mines has been excluded from the Mineral Resource Estimate due to uncertainties with collar locations.

For BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. All collars are picked up by a mine or contract surveyor.

RAB drilling makes up about 20% of the historic drilling and RC the other 80%. There are several campaigns of historic drilling between 1983 and 2012. These holes are sometimes without documentation of the rig type and capability, core size, sample selection and handling. RAB drilling was used to assist with geological and mineralisation wireframing and was excluded from the resource estimation process.

Sampling, sub-sampling techniques and Sample Analysis Method

All RC holes sampled on 1m intervals and split on-site to a smaller ~2kg sample for analysis. Goldfields analysed alternate samples and infill samples were subsequently tested once any anomalous zones were identified. Wet samples were scoop sampled. Some operators composited to 4m for initial analysis. 1m splits subsequently assayed if the composite interval was anomalous.

Assaying was generally by 50g Fire Assay utilising certified laboratories. BDC RC drilling was sampled and assayed every metre by 40g fire assay. A review of the QAQC data found analytical results to be satisfactory for inclusion in the resource estimation

BDC is of the opinion that the historic drilling was completed to industry standard by well-established drill companies. Sampling and assay procedures are described and are to industry standard. BDC RC drilling was assayed by fire assay and a system of QAQC checks implemented. For historic drilling (pre EXG) much of the QAQC data is unavailable and results are unknown.

Estimation Methodology

Grade estimation was by Ordinary Kriging for Au using GEOVIA Surpac™ software. The estimate was resolved into 2m (E) x 10m (N) x 10m (RL) parent cells that have been sub-celled at the domain boundaries for accurate domain volume representation. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, top-cuts were applied to some of the domains.

Cut-off Grades

The Mineral Resource reported by the Company is that portion of the resource model that is above 0.5g/t Au and is constrained to a depth of 200m below surface to reflect potential development by open pit mining. This satisfies the "reasonable prospects of eventual economic extraction" criteria for JORC compliance. Only Indicated and Inferred mineralisation that falls within this area is reported as Mineral Resource. Historic underground mining has taken place at the deposit, the extents of which are unknown, and as a result the resource has not been depleted for this mining.

The currently defined depth extent of mineralisation does not warrant reporting of resources with potential for extraction by underground mining.

Resource Classification

The classification attempts to categorise areas of the block model to reflect confidence in the geological framework and estimation quality. The classification takes account of confidence in the geological interpretation and sample density.

The deposit is only classified as Inferred due to the lack of specific bulk density measurements and further core holes are required to confirm geological and structural interpretations. In part the deposit is drilled with sufficient drill density, 20-25mE and 20-25mN spacing to be classified as Indicated, however, the lacking drill core information has resulted in a more conservative approach.

Mining Assumptions

No modifying factors were applied to the reported Mineral Resources. Parameters including geotechnical, mining dilution, ore loss and metallurgical recoveries will be considered during the mining evaluation of the project.

Metallurgical Assumptions

Metallurgical test work has not been done on Nerrin Nerrin mineralization.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource.

VETTERSBURG SOUTH

Geology and Geological Interpretation

Vettersburg South gold mineralisation is located proximal to a north-south trending sediment/dolerite contact. The majority of the gold mineralisation is flat lying in nature within the oxide material and is probably related to supergene processes. Primary gold mineralisation is within a steeply dipping shearzone sub-parallel to the contact. A possible north-east striking structure appears to influence the gold mineralisation.

Drilling Techniques

The Vettersburg South deposit has been defined by an extensive drill database, including some historical and considerable drilling completed by Excelsior. Drilling is on an approximate 30m x 20m spacing.

Sampling, sub-sampling techniques and Sample Analysis Method

All RC holes sampled on 1m intervals and split on-site to a smaller ~2kg sample for analysis. Sampling of wet samples is unknown, although it is likely that most samples were dry..

Assaying was generally by 50g Fire Assay utilising certified laboratories. BDC RC drilling was sampled and assayed every metre by 40g fire assay. A review of the QAQC data found analytical results to be satisfactory for inclusion in the resource estimation.

Estimation Methodology

Grade estimation was by Ordinary Kriging for Au using Micromine software. The estimate was resolved into 4m (E) x 10m (N) x 5m (RL) parent cells.. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, top-cuts were applied to some of the domains.

Cut-off Grades

A nominal lower-cut off grade of 0.6g/t Au was used for reporting based on geological and grade continuity mindful of possible economic breakeven grades

Resource Classification

The classification attempts to categorise areas of the block model to reflect confidence in the geological framework and estimation quality. The classification takes account of confidence in the geological interpretation and sample density.

Mining Assumptions

No modifying factors were applied to the reported Mineral Resources. Parameters including geotechnical, mining dilution, ore loss and metallurgical recoveries will be considered during the mining evaluation of the project.

Metallurgical Assumptions

Metallurgical test work has not been completed.

Other Modifying Factors

No modifying factors are applied to the Mineral Resource

RESERVES

GWALIA ORE RESERVES

The Gwalia Ore Reserves have been calculated on a $2,000/oz gold price assumption. The Ore Reserve includes only Proved and Probable classifications. The economically mineable component of the Measured Mineral Resource has been classified as a Proved Ore Reserve while the economically mineable component of the Indicated Mineral Resource has been classified as a Probable Ore Reserve.

All ore in the Ore Reserve estimate is classified as a Proved or Probable Ore Reserve. No Inferred Mineral Resources are included in the Ore Reserve. The Inferred Mineral Resources in the Life of-Mine plan have been removed from the Ore Reserve plan and estimate.

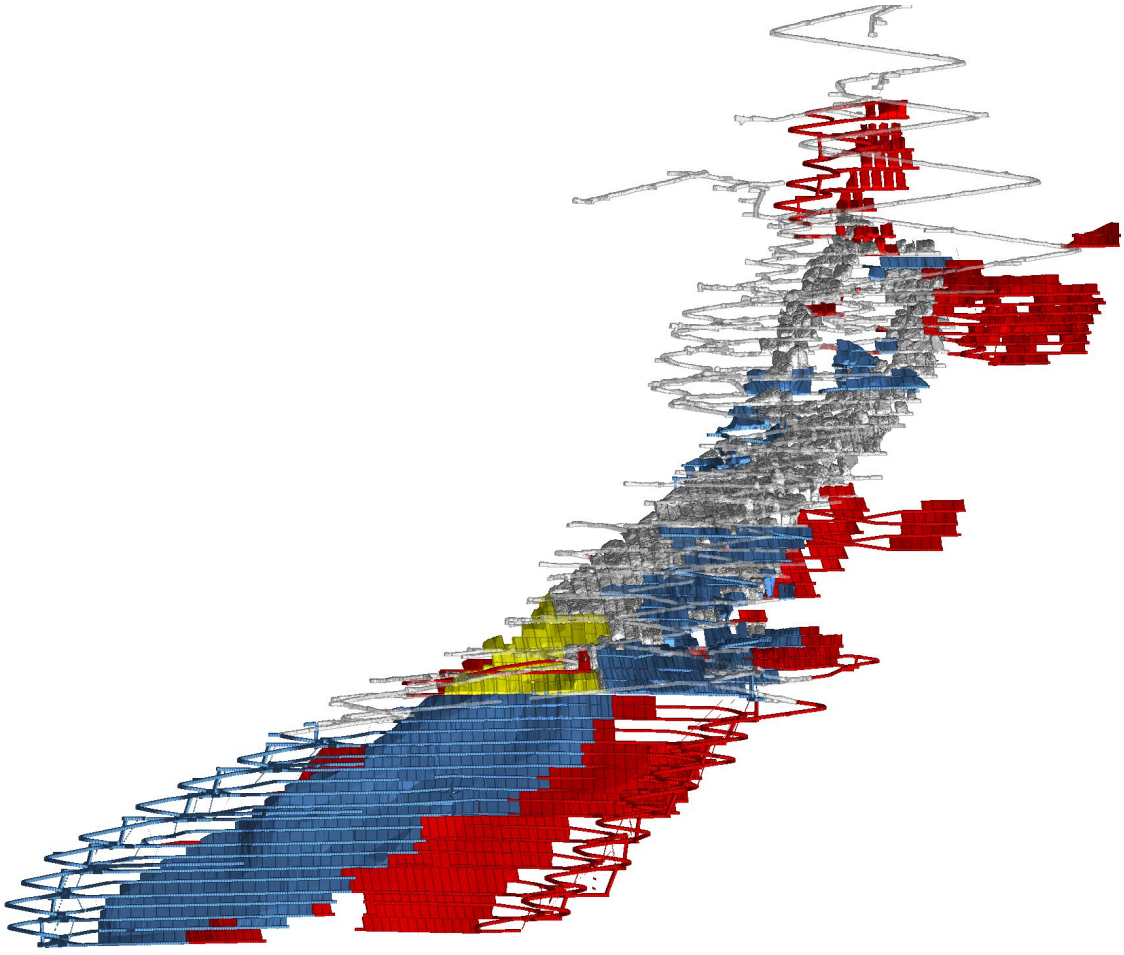

Figure 2: Gwalia Underground Life of Mine

Mining Method and Assumptions

The Gwalia Ore Reserve has been estimated based on detailed mine development and stope designs. Modifying factors for dilution and mining recovery have been applied post geological interrogation to generate the final diluted and recovered Ore Reserve.

The Gwalia Mine is in full production with an extensive production history. Mining methods referenced in this report are currently in practice on site or have been subject to trial mining. Reconciliation results and production history show this mining method to be well matched to the ore body.

Stope size, development placement and ground support strategies have been designed in line with recommendations from experienced geotechnical personnel and external subject matter experts. Grade control drilling is completed in advance of production with the majority of stopes to be mined in the next two years already grade control drilled.

The following mining assumptions have been applied:

- For South West Branch (SWB) and South Gwalia Series (SGS), the dilution is estimated for each individual stope based on known influences. These include the mining direction, strike length, stope width, and depth below surface. The relationships between these factors and stope dilution have been modelled through back-analysis of actual reconciled stope performance. The average of the estimated dilution for all SWB stopes in the Ore Reserve is 13% and the average estimated dilution for SGS stopes is 17%.
- Mining dilution of 20% has been applied to all West Lode stopes. Mining dilution of 22% has been applied to Main Lode stopes.
- A 92% mining recovery factor has been applied to triple-lift and double-lift long-hole open stopes. A 90% mining recovery factor has been applied to single-lift long-hole open stopes. These factors are consistent with reconciled actual performance.
- The profiles of development excavations have been designed inclusive of 10% overbreak. No further dilution factors or mining recovery factors have been applied to development ore.
- A global minimum mining width of 3m is used. While the ore body width generally exceeds the minimum mining width, where the ore body is narrower stoping outlines are designed to honour the minimum width and include planned dilution.

Processing Method & Assumptions

All Gwalia ore is trucked to the Gwalia processing plant. The processing plant is located at St Barbara's Leonora Operations and consists of a three-stage crushing circuit, single-stage milling circuit and hybrid carbon-in-leach (CIL) circuit with one designated leach tank and seven adsorption tanks. Gold is recovered from activated carbon into concentrated solution via a split AARL type elution circuit. Electrowinning and smelting are conducted in an adjacent secure gold room. The tailings from the process are thickened and pumped to a paddock type tailings storage facility with multi-spigot distribution.

The technology associated with processing of Gwalia ore is currently in operation and is based on industry standard practices.

Metallurgical recovery is modelled based on the observed relationship between head grade and recovery. The average of the modelled metallurgical recovery over the Ore Reserve mine plan is 95.8%.

Cut-Off Grade

Cut-off grade assumptions are derived from cost estimates developed for Life of Mine forecast. A break-even type analysis was used to determine the cut-off grades used in the Ore Reserve estimate, with the following derived estimates:

- 4.0 g/t Stope Evaluation Cut-Off Grade - used to define the extent of economic stoping areas on a level.
- 1.6 g/t Stope Only Cut-Off Grade - used to define additional stopes that can be mined without extra development and without delaying the main mining sequence.
- 0.6 g/t Process Only Cut-Off Grade - used to differentiate between development ore and development waste.

Environmental Approvals

The Gwalia mine is currently compliant with all environmental regulatory instruments under the Environmental Protection Act 1986 and Mining Act 1978.

All external reporting against the environmental licenses and tenements are recorded and reported in the Annual Environmental Report available on the St Barbara and the regulator website.

Infrastructure

The infrastructure requirements of the stoping methods used are either already in place or have been accounted for in the Life of Mine evaluation on which the project costings are based. The capital and operating costs of extending the ventilation infrastructure to support truck haulage down to the base of the Ore Reserve have been included in the economic evaluation which demonstrates the economic viability of the Ore Reserve.

Existing equipment required for the mining and processing of the Ore Reserve is in place and operational. It is located on tenements held by St Barbara Limited. The infrastructure includes, but is not limited to:

- Dedicated gas and diesel power station
- Water supply from three sources to provide redundancy
- Processing plant
- Mine development
- Underground power and dewatering infrastructure
- Workshop facilities on surface and underground
- Ventilation fans and refrigeration plant
- Paste fill plant
- Camp facilities
- Access to public roads and airstrips.

TOWER HILL ORE RESERVES

The Tower Hill Reserves are derived from a pre-feasibility study (PFS) undertaken by St Barbara on the Tower Hill deposit, with AMC Consultants Pty Ltd (AMC) engaged to develop the mine plan and geotechnical recommendations to a PFS level and provide an Ore Reserve estimate. It considers a cut back of the Tower Hill deposit which was mined in the 1980s by open pit but is currently not operating.

The Tower Hill Ore Reserves have been calculated on a $2,000/oz gold price assumption. The Ore Reserve includes only Probable classifications. The economically mineable component of the Indicated Mineral Resource has been classified as a Probable Ore Reserve.

All ore in the Ore Reserve estimate is classified as a Probable Ore Reserve. No Inferred Mineral Resources are included in the Ore Reserve. The Inferred Mineral Resources in the Life of-Mine plan have been removed from the Ore Reserve plan and estimate.

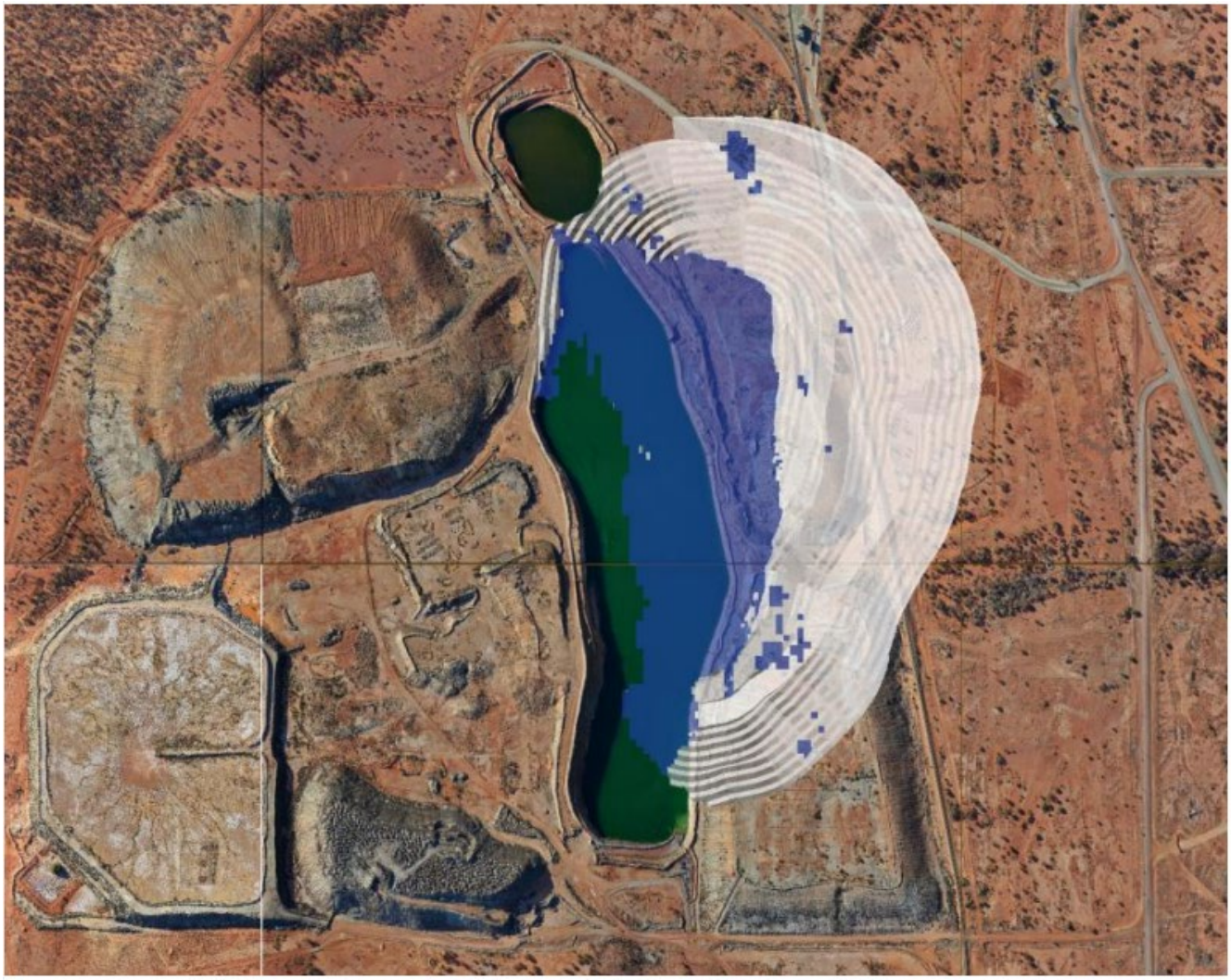

Figure 3: Tower Hill Open Pit LOM

Mining Method and Assumptions

The Tower Hill Reserves are based on the mining of an open pit based on the following assumptions:

- Final pit limits were determined from pit optimisation using Whittle Four-X software, the diluted resource model, geotechnical parameters and metal prices, recoveries and operating costs agreed with St Barbara followed by final pit and stage design and mine scheduling.
- Mining is proposed by contract truck and excavator mining, using drill and blast on 10 m benches and excavators operating on 5 m benches near surface for bulk waste mining and then transitioning to drill and blast on 5 m benches and excavators operating on 2.5 m benches. The Tower Hill mine schedule will be integrated with other ore sources for the Gwalia mill so that the pre-strip for Tower Hill does not impact the Gwalia mill ore supply.
- Geotechnical parameters used for Tower Hill were developed by AMC during the PFS based on two weathering zones, with inter ramp angles ranging from 33° (50° batter angles, 7 m berms and 10 m batter heights) to 55° (70° batter angles, 7 m berms and 20 m batter heights), which represents an overall slope of approximately 42° after inclusion of ramps.
- Mine planning used a diluted resource model with allowance for losses incurred during mining modelled by applying a 2 m dilution skin to ore lodes. This resulted in ore loss of 7% and dilution of 21%.
- Haul road widths of 32 m for dual access roads and 18 m for single access roads were used. Minimum mining width of 20 m was used and 40 m for pushbacks.

- Inferred Mineral Resources were included in dilution analysis but excluded from pit optimisation and treated as waste.
- No specific infrastructure is required for mining Tower Hill, although as the pit void is currently filled with water, dewatering pumps and lines are required to transfer the water to other nearby pit voids.

Processing Method & Assumptions

The free milling Tower Hill ore will be processed through the nearby upgraded 2.1 Mtpa Gwalia processing plant. The existing plant consists of a 1.4 Mtpa crushing and grinding circuit followed by a conventional gravity recovery and carbon-in-leach (CIL) circuit.

The existing plant utilises proven technology and the plant upgrade, has been defined through feasibility level studies and metallurgical testwork.

The metallurgical testwork undertaken for Tower Hill has been carried out on a large number of discrete variability samples from mostly ½ NQ diamond drill core samples across several test work programs carried out at reputable, industry leading metallurgical testing laboratories. Samples selected for testing were based on spatial and mineralogical distribution within the Tower Hill economic pit shell.

There are no known deleterious elements and no allowance is made in the Ore Reserve estimate for deleterious elements.

Tower Hill was previously mined in the 1980's and the metallurgical characteristics of the ore were well known. Formulae were applied to estimate gold recovery based on life-of-mine feed grades, with an average recovery of 93.4%. No bulk sampling was required.

Feed to the Gwalia processing plant will be a blend of multiple St Barbara ore sources of varying grade and mineralogy. No specification will be required for the Gwalia plant feed once the refractory components are installed as part of the upgrade

Cut-Off Grade

Cut-off grade assumptions are derived from cost estimates developed for Life of Mine forecast. The cut-off grade of 0.4 g/t Au to define ore is the breakeven grade for variable costs and a share of fixed costs for general and administration (G&A) and through the Gwalia processing plant.

Environmental Approvals

Tower Hill sits on a granted mining lease and the area has previously been significantly impacted by mining. Study work is currently in progress to complete a mining feasibility study including characterisation of waste rock and waste dump design. A Pre-Feasibility level study has recently been completed for a Life of Mine tailings storage which would accommodate all of Tower Hill's mine tailings. Approvals are currently in place for the 1.4 Mtpa process plant and associated infrastructure (TSF, power station) that processes the Gwalia ore. Current focus is on obtaining approvals for the 2.1 Mtpa process plant upgrade and progressing the environmental permitting study work (including noise, biological studies, hydrogeology, dewatering) for the Tower Hill open pit mining in parallel with the Feasibility Study.

Infrastructure

Tower Hill is a brownfields development located adjacent to the town of Leonora and the operating Gwalia underground mine. Power, water, telecommunications are available at or near the site and accommodation is available in Leonora at St Barbara's accommodation village. An airstrip is located adjacent to the site to transport the expected fly-in fly-out workforce.

APHRODITE ORE RESERVES

The Aphrodite Ore Reserves have been calculated on a $2,000/oz gold price assumption. The Ore Reserve includes only Probable classifications. The economically mineable component of the Indicated Mineral Resource has been classified as a Probable Ore Reserve.
All ore in the Ore Reserve estimate is classified as Probable Ore Reserve. No Inferred Mineral Resources are included in the Ore Reserve. The Inferred Mineral Resources in the Life of-Mine plan have been removed from the Ore Reserve plan and estimate.

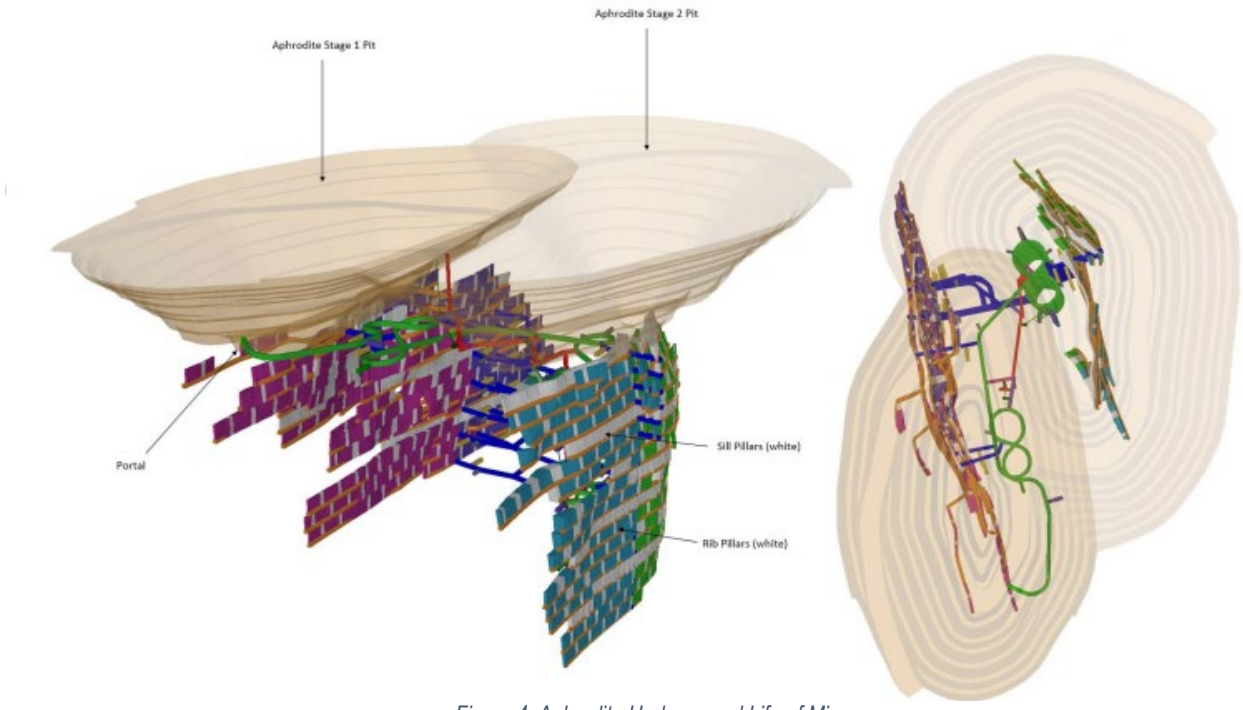

Figure 4: Aphrodite Underground Life of Mine

Mining Method and Assumptions

Mineral Resource material was converted to Ore Reserves after completing an optimisation process, detailed mine design, schedule and associated financial assessment.

The underground ore reserve is planned to be mined using conventional underground mining methods. The mining will consist of Longhole open Stoping (LHOS) on 20m level spacing with voids remaining open and insitu rock rib and sill pillars used for stability. Mining operations will be undertaken by an experienced and reputable mining contractor using a conventional fleet of twin boom jumbo's, 76mm production drills, 10-15t loaders and 60 tonne trucks.

The mining methods chosen are well-known and widely used in the local mining industry and production rates and costing can be predicted with a suitable degree of accuracy. Suitable access exists to the mine.

Underground designs are based on geotechnical parameters provided by independent consultants Peter O'Bryan & Associates.

The following assumptions were applied:

- Stope parameters used in the underground reserves are 20m level spacing (height), maximum 25m strike length, staggered rib pillars (minimum 1:1 width to length ratio) with sill pillars less than or equal to 80m spacing.
- Underground grade control will be carried out using diamond drill holes from stockpiles off the decline. The costs have been based off estimated drilling requirements and current diamond drill rates incurred by the company.

- Mineral Resources used for optimisation were those detailed previously. Cut-off grades and geotechnical inputs used for optimisations were also applied as detailed previously.
- A 10% waste (i.e. zero grade) dilution factor was applied to underground stoping and 10% waste dilution factor was used for mine development.
- In-situ stope recovery was assumed at 95%; Stope recovery where rib pillars are required was 0%; Stope recovery on levels where sill pillars are left varied from 30% to 0%, based on stope widths and panel heights. It was assumed all development is fully recovered.
- A minimum mining width of 2.5m was applied to underground stopes.

Inferred Resources were not taken into account during valuation in the underground design process, and as such did not have an impact on stope shape or development design. Any Inferred material contained within underground designs was treated as waste (i.e. zero grade).

Aphrodite is a greenfields site and will require all surface and underground infrastructure to be installed, including offices, workshops, first aid facilities, power supply, water management, stores, communications, fuel farm, magazines, waste dumps, run-of-mine (ROM) pads and access road upgrades. This has been allowed for in the Definitive Feasibility Study.

Processing Method & Assumptions

The refractory material will undergo flotation to form a concentrate which is proposed to be sold under a concentrate sale offtake agreement for downstream smelting and refining.

Aphrodite underground is 100% refractory material.

The Reserves includes construction of a floatation circuit to be located at the Gwalia processing facility 165km from the Aphrodite Mine Site. Ore will be transported by an external contractor, utilising road trains to the mill ROM. The free milling and refractory ore will be processed separately in campaigns.

Metallurgical recoveries are based on testwork results applied to the Geology models and mining schedule to determine the modelled life of mine flotation performance. The life of mine results are shown below:

- Mass recovery – 4.4%
- Gold recovery – 95.6%
- Gold grade – 57 g/t
- Arsenic Grade – 2.7%

Cut-Off Grade

Definitive Feasibility costs, revenue factors and physicals form the basis for Cut Off Grade calculations.

- Mill recovery is calculated based on metallurgical testwork carried out as part of the Definitive Feasibility Study.
- A gold price of A$2,000 / oz (US$1,500/oz) was assumed for the Cut Off Grade calculations.
- For refractory ore, cut-off grades include the concentrate costs which include logistics, insurances, treatment costs, penalties and payabilities.
- The underground COG of 1.9 g/t was used as the basis for initial stope design, with all designs assessed by detailed financial analysis to confirm their profitability in consideration to the works required to access and extract them.

Environmental Approvals

Baseline environmental studies have been completed for Aphrodite including vegetation and landform, macro fauna, subterranean fauna, short range endemics, surface hydrology, hydrogeology, waste rock classification and Aboriginal

heritage surveys. Clearing Permits have been obtained for the Aphrodite mining operation and a Mining Proposal has been submitted and is its final stages of review from DMIRS. There are no known reasons why mining approvals will not be granted for the Aphrodite underground operation.

Characterisation of representative waste rock samples at Aphrodite indicated that there is Potentially Acid Forming (PAF) material in the Alpha and Phi materials. Volumes of PAF material are to be confirmed with subsequent testing, however, are not expected to be significant. PAF material will be subject to a containment cell located within the waste dump, which will be adequately capped with fresh rock such that drainage is managed.

Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailing dams, and their impact to native vegetation, faunal habitat, surface hydrology and groundwater dependent ecosystems.

Infrastructure

The Aphrodite project is located 70km from the city of Kalgoorlie, adjacent the Goldfields highway, a sealed all-weather highway that is frequently travelled. This provides ready access to the site for transportation of infrastructure and consumables for the project. The infrastructure is designed to be located on tenement areas owned by Aphrodite.

Labour will be sourced from the nearby town of Kalgoorlie, where available, or on a fly-in fly-out basis through the Kalgoorlie airport, housing the relevant people within the city of Kalgoorlie.

Power will be provided by on site natural gas and diesel generators.

Water will be sourced from the nearby Scotia Borefield.

Infrastructure included in the study considers all necessary requirements including:

- Offices
- Workshops
- Power Station
- Dewatering and Water Supply
- Magazines
- Compressors
- Laydown
- Site Access Roads

ZOROASTRIAN ORE RESERVES

The Zoroastrian Ore Reserves have been calculated on a $2,000/oz gold price assumption. The Ore Reserve includes only Probable classifications. The economically minable component of the Indicated Mineral Resource has been classified as a Probable Ore Reserve.

All ore in the Ore Reserve estimate is classified as Probable Ore Reserve. No Inferred Mineral Resources are included in the Ore Reserve. The Inferred Mineral Resources in the Life of-Mine plan have been removed from the Ore Reserve plan and estimate.

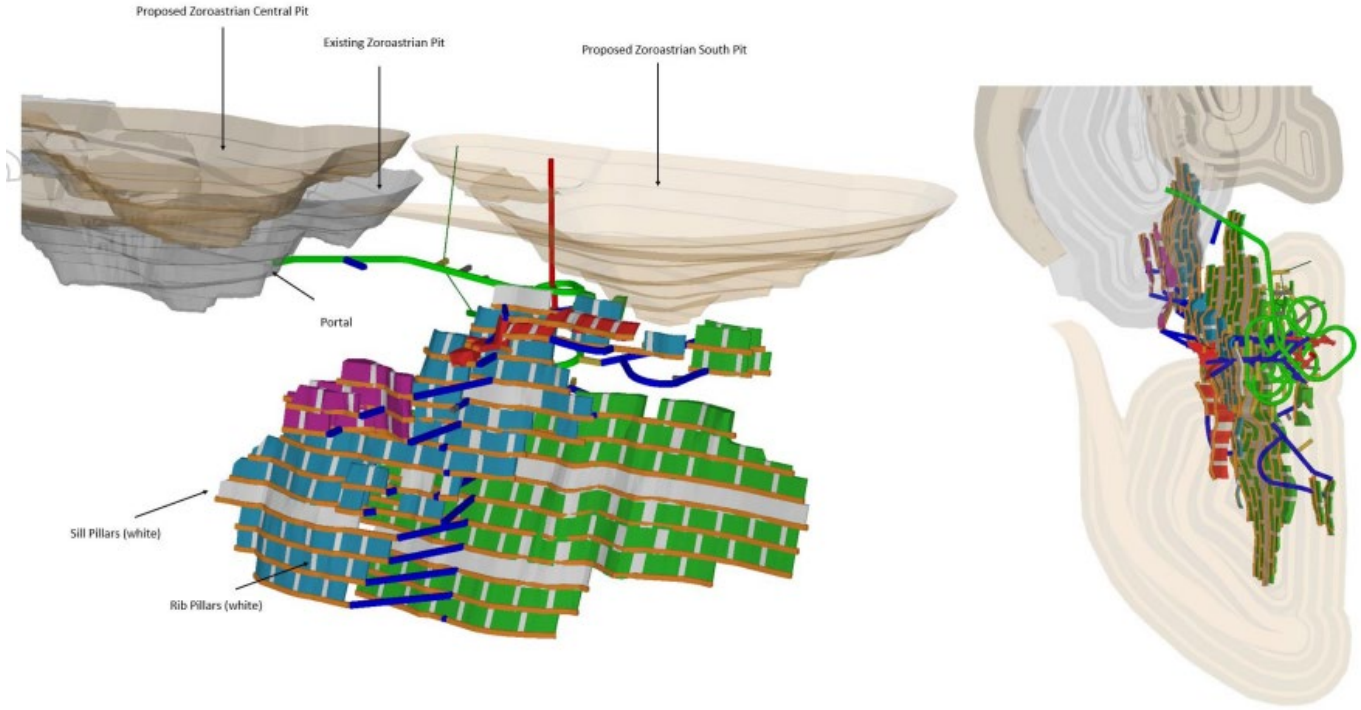

Figure 5: Zoroastrian Underground Life of Mine

Mining Method and Assumptions

Mineral Resource material was converted to Ore Reserves after completing an optimisation process, detailed mine design, schedule and associated financial assessment.

The underground ore reserve is planned to be mined using conventional underground mining methods. The mining will consist of Longhole open Stoping (LHOS) on 20m level spacing with voids remaining open and insitu rock rib and sill pillars used for stability. Mining operations will be undertaken by an experienced and reputable mining contractor using a conventional fleet of twin boom jumbo's, 76mm production drills, 10-15t loaders and 60 tonne trucks.

The mining methods chosen are well-known and widely used in the local mining industry and production rates and costing can be predicted with a suitable degree of accuracy. Suitable access exists to the mine.

Underground designs are based on geotechnical parameters provided by independent consultants Peter O'Bryan and Associates.

The following assumptions were applied:

- Stoping was designed within the recommended HR parameters of 7.5.
- Stope parameters used in the underground reserves are 20m level spacing (height), maximum 25m strike length, staggered rib pillars (minimum 1:1 width to length ratio) with sill pillars less than or equal to 80m spacing.
- Underground grade control will be carried out using diamond drill holes from stockpiles off the decline. The costs have been based off estimated drilling requirements and current diamond drill rates incurred by the company.
- Mineral Resources used for optimisation were those detailed previously. Cut-off grades and geotechnical inputs used for optimisations were also applied as detailed previously.
- A 10% waste (i.e. zero grade) dilution factor was applied to underground stoping and mine development.
- Insitu stope recovery as assumed at 95%; Stope recovery where rib pillars are required was 0%; Stope recovery, on levels where sill pillars are left was 0%. It is assumed all development is fully recovered.

- A minimum mining width of 2.5m was applied to underground stopes.

Inferred Resources were not taken into account during valuation in the underground design process, and as such did not have an impact on stope shape or development design. Any Inferred material contained within underground designs was treated as waste (i.e. zero grade).

Although Zoroastrian is a brownfields site and will require all surface and underground infrastructure to be installed, including offices, workshops, first aid facilities, power supply, water management, stores, communications, fuel farm, magazines, waste dumps, run-of-mine (ROM) pads and access road upgrades. This has been allowed for in the Definitive Feasibility Study.

Processing Method & Assumptions

Ore will be processed through the existing Gwalia processing facility located 182km North of Zoroastrian. This is a standard CIL circuit suitable for treatment of the Zoroastrian Ore

All underground Material is Fresh and based on testwork it was determined that it would be most appropriate that a fixed head grade of 94.4% would be used for Reserve estimates. Zoroastrian ore has historically been processed through toll treatment campaigns in the goldfields, bulk samples collected during this period produced an average recovery rate of 96.5% and median recovery of 97%.

No deleterious elements were identified from the mineralogical/metallurgical assessments that impact on process selection.

Cut-Off Grade

Definitive Feasibility costs, revenue factors and physicals form the basis for Cut Off Grade calculations.

- Mill recovery is calculated based on metallurgical testwork carried out as part of the Definitive Feasibility Study.
- A gold price of A$2,000 / oz (US$1,500/oz) was assumed for the Cut Off Grade calculations.
- The underground COG of 2.0 g/t was used as the basis for initial stope design, with all designs assessed by detailed financial analysis to confirm their profitability in consideration to the works required to access and extract them.

Environmental Approvals

Base line environmental assessments have been completed with no known impacts on the mining and processing operation for Zoroastrian. A clearing permit and mining proposal is approved for the Zoroastrian underground and Zoroastrian North pit.

Characterisation of representative waste rock samples from Zoroastrian indicated most waste components have low sulphide levels and are classified Non-Acid Forming (NAF).

Infrastructure

The Zoroastrian project is located 50km from the city of Kalgoorlie, adjacent the Goldfields highway, a sealed all-weather highway that is frequently travelled. This provides ready access to the site for transportation of infrastructure and consumables for the project. The infrastructure is designed to be located on tenement areas owned by Aphrodite.

Labour will be sourced from the nearby town of Kalgoorlie, where available, or on a fly-in fly-out basis through the Kalgoorlie airport, housing the relevant people within the city of Kalgoorlie.

Power will be provided by on site natural gas and diesel generators.

•Water will be sourced from the nearby Scotia Borefield and through pit dewatering of the nearby Botswana Locker and Jackorite pits.

Infrastructure included in the study considers all necessary requirements including:

- Offices
- Workshops
- Power Station
- Dewatering and Water Supply
- Compressors
- Laydown
- Site Access Roads

This announcement is approved for release by Raleigh Finlayson, Managing Director, Genesis.

For further information:

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Competent Persons Statement

The information in this Presentation that relates to Ore Reserves at Gwalia and Zoroastrian is based on information, and fairly represents, information and supporting documentation compiled by Mr. Brett Ascott who is a Fellow of the Australasian Institute of Mining and Metallurgy. Brett Ascott is a full-time employee of St Barbara Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Brett Ascott consents to the inclusion in the statement of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves at Aphrodite is based on information, and fairly represents, information and supporting documentation compiled by Mr. Andrew Francis who is a Member of the Australasian Institute of Mining and Metallurgy. Andrew Francis is a full-time employee of Genesis Minerals Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Andrew Francis consents to the inclusion in the statement of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves at Tower Hill is based on information, and fairly represents, information and supporting documentation compiled by Mr. Martin Liu and Mr. Glen Williamson who are Members of the Australasian Institute of Mining and Metallurgy. Martin Liu and Glen Williamson are fulltime employees of AMC Consultants and have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Martin Liu and Glen Williamson consent to the inclusion in the statement of the matters based on their information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Tower Hill and the Bardoc Deposits are based on information, and fairly represents, information and supporting documentation compiled by Ms. Jane Bateman who is a Fellow of the Australasian Institute of Mining and Metallurgy. Jane Bateman is a full-time employee of St Barbara Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Jane Bateman consents to the inclusion in the statement of the matters based on her information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Gwalia and Harbour Lights is based on information, and fairly represents, information and supporting documentation compiled by Mr. David Reid who is a Fellow of the Australasian Institute of Mining and Metallurgy. David Reid is a full-time employee of St Barbara Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". David Reid consents to the inclusion in the statement of the matters based on his information in the form and context in which it appears.

Forward-looking statements

Some statements in this Presentation regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future matters. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this Presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions.

Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results and may cause Genesis' actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. These risks and uncertainties include but are not limited to liabilities inherent in mine development and production, geological, mining and processing technical problems, the inability to obtain any additional mine licenses, permits and other regulatory approvals required in connection with mining and third party processing operations, competition for among other things, capital, acquisition of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of acquisitions, changes in commodity prices and exchange rate, currency and interest fluctuations, various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, the ability to secure adequate financing and management's ability to anticipate and manage the foregoing factors and risks. These and other factors should be considered carefully and readers should not place undue reliance on such forward-looking information. There can be no assurance that forward-looking statements will prove to be correct.

Disclaimer

The information in this announcement relating to estimates of Mineral Resources and Ore Reserves were compiled by St Barbara. The Mineral Resources and Ore Reserves estimates in this announcement have been previously reported and Genesis relies on this information and the Competent Persons who have reviewed the Mineral Resources and Ore Reserves contained in this announcement and consented to its release.

Appendix 1 - JORC TABLE 1s

JORC Table 1 Checklist of Assessment and Reporting Criteria – GWALIA DEEPS
Section 1 Sampling Techniques and Data – Gwalia Deeps

Criteria	JORC Code explanation	Comments
Sampling Techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Sampling boundaries are geologically defined and one metre in length unless a significant geological feature warrants a change from this standard unit. The upper or right-hand side of the core is routinely submitted for sample analysis, with each one metre of half core providing between 2.5 – 3 kg of material as an assay sample. Minimum sample length is 0.30 m.
Drilling Techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Surface and underground diamond drill holes used NQ2 (50.6mm) sized core (standard tubes). SBM surface drill holes have been down hole surveyed by north seeking gyro and underground drill holes have been surveyed by single shot electronic camera. Surface holes are orientated using a Reflex ACT II RD orientation tool.
Drill Sample Recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Core is metre marked and orientated and checked against driller's blocks to ensure that any core loss is accounted for. Sample recovery for all holes was rarely less than 100%. Minor occurrences of core loss can in most instances be attributed to drilling conditions and not ground conditions.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All SBM holes are logged primarily for lithology, alteration and vein type/intensity which are key to modelling gold grade distributions. Validation of geological data is controlled via the use of library codes and reliability and consistency of data is monitored through regular peer review.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• SBM half core is cut using a core saw before being sent to an accredited lab (SGS laboratory in Kalgoorlie) where the entire sample is crushed to achieve particle size <4mm followed by complete pulverisation (90% passing 75 µm).
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• SBM samples were analysed for gold using fire assay with a 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS). QC included insertion of 3 commercial standards (1 per 25 samples), use of barren flush material between designated high grade samples during the pulverising stage, re-numbered sample pulp residues re-submitted to original laboratory, and sample pulp residues submitted to accredited umpire laboratory, submission of residual (duplicate) half core from ore intervals.
Verification of sampling and assay	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Sampling data is recorded electronically in spreadsheets which ensure only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on secure company server and validated.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• Collars for surface holes are recorded by DGPS • Upon completion of underground drill holes, an authorised surveyor will pick up the collar by placing a survey rod into the hole to measure azimuth and dip. This process may also occur while the hole is in progress by surveying the drill rods in the hole.

Criteria	JORC Code explanation	Comments
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Data spacing for underground resource definition is approximately 20m x 25m and surface drilling is approximately 60m x 80m. Drilling data is sufficient to establish continuity for all lodes.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• All drill core is marked for orientation, and sampling is perpendicular to lode orientations and based on past production and underground mapping.
Sample security	• *The measures taken to ensure sample security.*	• Only SBM personnel or approved contractors are allowed on drill sites; drill samples are only removed from drill site by approved contractors to SBM's secure core logging/processing facility; cut core is consigned to accredited laboratories for sample preparation and analysis.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Regular reviews of core logging and sampling have been completed through SBM mentoring and auditing. Laboratory inspections have been conducted throughout the review period by SBM personnel. Inspections are documented electronically and stored on secure company server. No significant issues were identified.

Section 2 Reporting of Exploration Results - Gwalia Deeps

Criteria	JORC Code explanation	Comments
Mineral Tenement and Land Tenure Status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The reported resource is completely located within M37/25 which is 100% owned by St Barbara Limited. The tenement is in good standing at the time of reporting.
Exploration Done by Other Parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Initial exploratory drilling of Gwalia Deeps (below 1075 metres below surface (mbs)) was undertaken between March 1986 and May 1989 as a jointly funded project between Western Mining Corporation and Sons of Gwalia (SGW). Four diamond holes and two wedge holes were drilled targeting mineralisation between 1,200 – 1,400mbs. • In 1998, SGW began phase I of the Gwalia Deeps drilling program. This consisted of two parent holes (GWDD5 and GWDD6) and 5 daughter holes (GWDD6A – E), targeting mineralisation between 1,200m – 1,300m vertical depth. GWDD5 was abandoned before reaching target because of excessive deviation. • SGW commenced a phase II program in 2000, completing a further four parent holes GWDD7 – GWDD10 and a further 5 daughter holes
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Gold mineralisation occurs as a number of en-echelon, moderately east dipping foliation parallel lodes within strongly potassic altered mafic rocks and extends over a strike length of approximately 500m and to a vertical depth of at least 2,300 m. Four primary lodes (Main Lode, South West Branch, South Gwalia Series and West Lode) have been identified with the geometries summarised above.

Drill Hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are presented.

Data Aggregation Methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*	• No exploration results are presented.

Criteria	JORC Code explanation	Comments
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship Between Mineralisation Widths and Intercept Lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced Reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other Substantive Exploration Data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further Work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further resource definition drilling is planned at this stage

Section 3 Estimation and Reporting of Mineral Resources – Gwalia Deeps

Criteria	JORC Code explanation	Comments
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is captured through spread sheets and validated prior to loading into the SBM corporate database which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in an SQL database on secure company server. Validation of data included visual checks of hole traces, analytical and geological data and ad hoc validation of holes to original core photos and hard copy geological logs.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited site on 16th September 2022 and inspected accessible underground development faces and grade control diamond core
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Mineralisation domains are defined by abundance of quartz and quartz/carbonate veining, the presence of distinctive laminated veining (quartz/sericite/sulphides +/- au), strong potassic alteration, abundance of sulphides (commonly >3% pyrite) and elevated gold grade (>0.5g/t Au).
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation strikes at approximately 170 degrees over a distance of 160m and dip to the east 40 degrees. Mineralisation is conformable with the foliation of the Mine Sequence mafic schists. Individual lodes have an average horizontal width of 15m
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.*	• All domains were estimated using ordinary kriging except for South West Branch below the dyke (~1240mbs) where indicator kriging was used for grade estimation. • Four parent block sizes have been estimated; 4mE x 8mN x 4mRL for areas covered by underground grade control drilling, 8mE x 16mN x 4mRL for the area covered by resource development drilling, 16mE x 32mN x 4mRL for areas covered by surface drilling below approximately 1,800 metres vertical depth and 32mE x 32mN x 32mRL for the Mafic Hanging wall. • Estimation was completed using Datamine Studio RM. Search parameters for the gold estimation reflect a high-grade plunge orientation east-north-east for WL, south-east to east for SGS and south-east for SWB and ML consistent with geological observation of high grade mineralisation geometry: • Main Lode 1 – Rotation Azimuth = 350 degrees, Dip = 40 degrees, Pitch = 140 degrees. Max search distances = 355m. Major/Semi-Major anisotropy = 4.2; Major/Minor = 14.2 Min samples = 8, max samples = 20

Criteria	JORC Code explanation	Comments
	• *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Main Lode 2 – Rotation Azimuth = 350 degrees, Dip = 40 degrees, Pitch = 120 degrees. Max search distances = 130m. Major/Semi-Major anisotropy = 2.6; Major/Minor = 13 Min samples = 8, max samples = 20 • South West Branch 1– Rotation Azimuth = 355 degrees, Dip = 40 degrees, Pitch = 110 to 140 degrees (pitch varies slightly between indicator groups and Au groups). Max search distances = 250m. Major/Semi-Major anisotropy = 3.1; Major/Minor = 8.3. Min samples = 8, max samples =20 • South West Branch 2– Rotation Azimuth = 355 degrees, Dip = 40 degrees, Pitch = 130 degrees. Max search distances = 250m. Major/Semi-Major anisotropy = 3.1; Major/Minor = 8.3. Min samples = 8, max samples =20 • South Gwalia Series 1 – Rotation Azimuth = 348 degrees, Dip = 45 degrees, Pitch = 110 degrees. Max search distances = 145m. Major/Semi-Major anisotropy = 1.5; Major/Minor = 4.1. Min samples = 8, max samples =20 • South Gwalia Series 2 – Rotation Azimuth = 348 degrees, Dip = 45 degrees, Pitch = 120 degrees. Max search distances = 170m. Major/Semi-Major anisotropy = 1.4; Major/Minor = 6.8. Min samples = 8, max samples =20 • West Lode – Rotation Azimuth = 350 degrees, Dip = 45 degrees, Pitch = 90 degrees. Max search distances = 180m. Major/Semi-Major anisotropy = 1.3; Major/Minor = 7.2. Min samples = 8, max samples =20 • Isolated high grade composites were top cut prior to estimation for each domain (ML=120g/t, SWB1=180/220g/t, SWB2=135g/t, SGS1=90g/t, SGS2=90g/t, WL=90g/t). • Main Lode Group – Omnidirectional. Max search distances = 330m. Min samples = 12, max samples = 25 • South West Branch Group – Omnidirectional. Max search distances = 600m. Min samples = 12, max samples = 25 • South Gwalia Series 1 – Omnidirectional. Max search distances = 230m. Min samples = 12, max samples = 25 • South Gwalia Series 2 – Omnidirectional. Max search distances = 100m. Min samples = 12, max samples = 25 • West Lode – Omnidirectional. Max search distances = 550m. Min samples = 12, max samples = 25 • Mine Schist – Omnidirectional. Max search distances = 750m. Min samples = 12, max samples = 25 • Dyke – Omnidirectional. Max search distances = 120m. Min samples = 12, max samples = 25 • Mafic Hanging wall – Omnidirectional. Max search distances = 600m. Min samples = 12, max samples = 25 • Density measurements below the 0.5 percentile and above 99.5 percentile were removed from the dataset prior to estimation as they were suspected to contain erroneous values. • The model was validated by plotting composite and block model average values against RL for both gold and density
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on a dry basis
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The model is reported at a cut-off of 2.5g/t Au on 20mRL by 20mN panels for each lode to account for non-selective mining internally within each lode.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The mining method is underground, open stoping with paste fill.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Metallurgical recovery has been proven to be consistently >95%

Criteria	JORC Code explanation	Comments
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• The project covers an area that has been previously impacted by mining. The tenement area includes existing ethnographic heritage sites. SBM have undertaken extensive Aboriginal Heritage Surveys within the tenements and management measures are in place.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density is assigned by lode and ranges from 2.71 to 2.79.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The resource is classified as a function of drill spacing, geological continuity and mining. Areas where grade control drilling has been completed to 20m x 30m and geological continuity has been established through mining are classified as Measured. Areas where drill density is 30m x 40m, 60m x 80m or less with high geological continuity are classified as Indicated and elsewhere where drill density is sparse classified as Inferred.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource model was reviewed internally. The reporting of the company Mineral Resources is guided by the company's Mineral Resource Estimation System and is overseen by the Executive Leadership team. External reviews are completed approximately every 3 years.
Discussion of relative accuracy/confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The resource estimate is a global estimate.

Section 4 Estimation and Reporting of Ore Reserves – Gwalia Deeps

Criteria	JORC Code explanation	Comments
Mineral Resource Estimate for Conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The underground Ore Reserve estimate is based on the Mineral Resource estimate carried out by St Barbara Limited. Gold grade was estimated using ordinary kriging for all lodes with the exception of the South West Branch at depths exceeding 1,240 metres below surface where indicator kriging was used. • The Mineral Resources are reported inclusive of the Ore Reserve. • The Mineral Resource model used to estimate this Reserve is described as gwc_20221018.bmf
Site Visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited site on multiple occasions during the past two years
Study Status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• A Definitive Feasibility Study was completed for the Gwalia mine in 2008. The mine has been in full production since. Any further studies undertaken are to extend the mine or optimise the current operating practices.
Cut-off Parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• A break-even type analysis was used to determine the cut-off grades used in the Ore Reserve estimate. • 4.0 g/t Stope Evaluation Cut-Off Grade - used to define the extent of economic stoping areas on a level.

Criteria	JORC Code explanation	Comments
		• 1.6 g/t Stope Only Cut-Off Grade - used to define additional stopes that can be mined without extra development and without delaying the main mining sequence. • 0.6 g/t Process Only Cut-Off Grade - used to differentiate between development ore and development waste.
Mining Factors or Assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• The Gwalia Ore Reserve has been estimated based on detailed mine development and stope designs. Modifying factors for dilution and mining recovery have been applied post geological interrogation to generate the final diluted and recovered Ore Reserve. • The Gwalia Mine is in full production with an extensive production history. Mining methods referenced in this report are currently in practice on site or have been subject to trial mining. Reconciliation results and production history show this mining method to be well matched to the ore body. • Stope size, development placement and ground support strategies have been designed in line with recommendations from experienced geotechnical personnel and external subject matter experts. Grade control drilling is completed in advance of production with the majority of stopes to be mined in the next two years already grade control drilled. • For South West Branch (SWB) and South Gwalia Series (SGS), the dilution is estimated for each individual stope based on known influences. These include the mining direction, strike length, stope width, and depth below surface. The relationships between these factors and stope dilution have been modelled through back-analysis of actual reconciled stope performance. The average of the estimated dilution for all SWB stopes in the Ore Reserve is 13% and the average estimated dilution for SGS stopes is 17%. • Mining dilution of 20% has been applied to all West Lode stopes. Mining dilution of 22% has been applied to Main Lode stopes. • A 92% mining recovery factor has been applied to triple-lift and double-lift long-hole open stopes. A 90% mining recovery factor has been applied to single-lift long-hole open stopes. These factors are consistent with reconciled actual performance. • The profiles of development excavations have been designed inclusive of 10% overbreak. No further dilution factors or mining recovery factors have been applied to development ore. • A global minimum mining width of 3m is used. While the ore body width generally exceeds the minimum mining width, where the ore body is narrower stoping outlines are designed to honour the minimum width and include planned dilution. • All ore in the Ore Reserve estimate is classified as a Proved or Probable Ore Reserve. No Inferred Mineral Resources are included in the Ore Reserve. The Inferred Mineral Resources in the Life of-Mine plan have been removed from the Ore Reserve plan and estimate. • The infrastructure requirements of the stoping methods used are either already in place or have been accounted for in the Life of Mine evaluation on which the project costings are based. The capital and operating costs of extending the ventilation infrastructure to support truck haulage down to the base of the Ore Reserve have been included in the economic evaluation which demonstrates the economic viability of the Ore Reserve.
Metallurgical Factors or Assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• All Gwalia ore is trucked to the Gwalia processing plant. The processing plant is located at St Barbara's Leonora Operations and consists of a three-stage crushing circuit, single-stage milling circuit and hybrid carbon-in-leach (CIL) circuit with one designated leach tank and seven adsorption tanks. Gold is recovered from activated carbon into concentrated solution via a split AARL type elution circuit. Electrowinning and smelting are conducted in an adjacent secure gold room. The tailings from the process are thickened and pumped to a paddock type tailings storage facility with multi-spigot distribution. • The technology associated with processing of Gwalia ore is currently in operation and is based on industry standard practices. • Metallurgical recovery is modelled based on the observed relationship between head grade and recovery. The average of the modelled metallurgical recovery over the Ore Reserve mine plan is 95.8%.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• The Gwalia mine is currently compliant with all environmental regulatory instruments under the Environmental Protection Act 1986 and Mining Act 1978. • All external reporting against the environmental licenses and tenements are recorded and reported in the Annual Environmental

Criteria	JORC Code explanation	Comments
		Report available on the St Barbara and the regulator website.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• All equipment required for the mining and processing of the Ore Reserve is in place and operational. It is located on tenements held by St Barbara Limited. The infrastructure includes, but is not limited to: • Dedicated gas and diesel power station • Water supply from three sources to provide redundancy • Processing plant • Mine development • Underground power and dewatering infrastructure • Workshop facilities on surface and underground • Ventilation fans and refrigeration plant • Paste fill plant • Camp facilities • Access to public roads and airstrips.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• All costs used in the estimation of Ore Reserves are based on the Life-of-Mine plan. • Operating costs are estimated as part of the internal budgeting process and approved by the St Barbara Limited board. • A gold price of AU$2000/oz has been used in all calculations. • Exchange rates are sourced from recommendations by the Group Treasury and accepted by the Executive Leadership Team (ELT). • Costs associated with treatment and transport have been included in the cost modelling completed for the project based on the Life of Mine plan. • Royalties have been included at the WA government royalty of 2.5% of gold produced. A Resource Capital Royalty (IRC) is also applied to the Gwalia tenements and is applied at 1.5% of gold produced.
Revenue Factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• A gold price of AU$2000/oz has been used in all revenue calculations
Market Assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• All gold doré produced at the Gwalia processing plant is transported to the Perth Mint for refining.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• The mine is an operating asset and is not subject to project-type analysis. • Life-of Mine plans are developed or updated on an annual basis. These plans reflect current and projected performances for the Ore Reserve.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• St Barbara Limited's social licence to operate is underpinned by the excellent relationship that the Company has built, over many years, with the local community of Leonora. St Barbara Limited also recognises, and has a good relationship with the Aboriginal groups within the Leonora Region. • In 2022 the Darlot Native Title claim was successful in reaching determination and St Barbara will continue to work closely with the traditional owners in relation to land, heritage and culture.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• A company risk register is maintained to address and mitigate against all foreseeable risks that could impact the Ore Reserve. • Contracts are in place for all critical goods and services required to operate the mine.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived*	• The Ore Reserve includes only Proved and Probable classifications. • The economically minable component of the Measured Mineral Resource has been classified as a Proved Ore Reserve. • The economically minable component of the Indicated Mineral Resource has been classified as a Probable Ore Reserve.

Criteria	JORC Code explanation	Comments
	from Measured Mineral Resources (if any).	
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• SRK Consulting undertook a review of the Gwalia underground mine Ore Reserve process and estimate in July 2016. AMC Consultants have also reviewed the Ore Reserve estimation process and the basis of the inputs and modifying factors. This review was completed in 2018 and considered that the technical basis and process undertaken was of a suitable standard and supports reporting under the JORC Code (2012). AMC are currently completing another review on these current Ore Reserves with results due in early 2023.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The Ore Reserve estimate has been prepared in accordance with the guidelines of the JORC Code (2012). The relative confidence of the estimates contained fall with the criteria of Proved and Probable Ore Reserves. Significant operating history supports the modifying factors applied. • The Ore Reserve has been estimated in line with the St Barbara Ore Reserve process. The Ore Reserve process was externally audited in 2019 and found to be of good industry standard. The Ore Reserve has been peer reviewed internally and the Competent Person is confident that it is an accurate estimation of the current Gwalia reserve. AMC are currently conducting an external review on these current Ore Reserves with results due in early 2023.

JORC Table 1 Checklist of Assessment and Reporting Criteria - GWALIA SHALLOWS AND GWALIA OPEN PIT

Section 1 Sampling Techniques and Data – Gwalia Shallows and Gwalia Open Pit

Criteria	JORC Code explanation	Comments
Sampling Techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Sampling boundaries are geologically defined and one metre in length unless a significant geological feature warrants a change from this standard unit. The upper or right-hand side of the core is routinely submitted for sample analysis, with each one metre of half core providing between 2.5 – 3 kg of material as an assay sample. Minimum sample length is 0.30 m. • Upper parts of the deposit are covered by drilling completed by Sons of Gwalia (SGW) between 1997 and 2002.
Drilling Techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Surface and underground diamond drill holes used NQ2 (50.6mm) sized core (standard tubes). SBM surface drill holes have been down hole surveyed by north seeking gyro and underground drill holes have been surveyed by single shot electronic camera. Surface holes are orientated using a Reflex ACT II RD orientation tool. • SGW drilling consisted of both RC grade control drilling (4.5 or 5.5 inch diameter) and underground diamond drill holes of NQ2 core size.
Drill Sample Recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Core is metre marked and orientated and checked against driller's blocks to ensure that any core loss is accounted for. Sample recovery for all 5 holes was 100%. Minor occurrences of core loss can in most instances be attributed to drilling conditions and not ground conditions. • SGW drill hole recovery is reported to be 100% for majority of drilling.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	• All SBM holes are logged primarily for lithology, alteration and vein type/intensity which are key to modelling gold grade distributions. Validation of geological data is controlled via the use of library codes and reliability and consistency of data is monitored through regular peer review.

Criteria	JORC Code explanation	Comments
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• SGW holes was logged for lithology, alteration and vein intensity.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• SBM half core is cut using a core saw before being sent to an accredited lab (SGS laboratory in Kalgoorlie) where the entire sample is crushed to achieve particle size <4mm followed by complete pulverisation (90% passing 75 µm). • SGW report that both half and whole core sampling was conducted on one metre intervals. RC samples were riffle split to 3-4kg for one metre intervals.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• SBM and SGW samples were analysed for gold using fire assay with a 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS). • SBM QC included insertion of 3 commercial standards (1 per 25 samples), use of barren flush material between designated high grade samples during the pulverising stage, re-numbered sample pulp residues re-submitted to original laboratory, and sample pulp residues submitted to accredited umpire laboratory, submission of residual (duplicate) half core from ore intervals. • SGW QC is reported to consist of 3 replicates, 3 duplicates, 2 standards and one blank per 50 samples.
Verification of sampling and assay	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Sampling data is recorded electronically in spreadsheets which ensure only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on secure company server and validated.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• Upon completion of underground drill holes an authorised surveyor will pick up the collar by placing a survey rod into the hole to measure azimuth and dip. This process may also occur while the hole is in progress by surveying the drill rods in the hole. • SGW drill holes were surveyed using single shot electronic camera and collar position located by a surveyor.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Data spacing for underground resource definition is approximately 20m x 25m and surface drilling is approximately 60m x 80m. Drilling data is sufficient to establish continuity for all lodes. • Open pit grade control was completed to a spacing of 10mN by 10mE.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• All drill core is marked for orientation, and sampling is perpendicular to lode orientations and based on past production and underground mapping.
Sample security	• *The measures taken to ensure sample security.*	• Only SBM personnel or approved contractors are allowed on drill sites; drill samples are only removed from drill site by approved contractors to SBM's secure core logging/processing facility; cut core is consigned to accredited laboratories for sample preparation and analysis. • SGW sample security is not documented but expected to be of typical industry standard
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Regular reviews of core logging and sampling have been completed through SBM mentoring and auditing. Laboratory inspections have been conducted throughout the review period by SBM personnel. Inspections are documented electronically and stored on secure company server. No significant issues were identified. • Review of data migration of SGW data into SMB database was conducted and some data issues identified and corrected

Section 2 Reporting of Exploration Results - Gwalia Shallows and Gwalia Open Pit

Criteria	JORC Code explanation	Comments
Mineral Tenement and Land Tenure Status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The reported resource is completely located within M37/25, M37/33 and M37/849 which are 100% owned by St Barbara Limited. The tenement is in good standing at the time of reporting.
Exploration Done by Other Parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The majority of the drilling was completed by SGW
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Gold mineralisation occurs as a number of en echelon, moderately east dipping foliation parallel lodes within strongly potassic altered mafic rocks and extends over a strike length of approximately 500m and to a vertical depth of at least 2,300 m..

Drill Hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are presented.

Data Aggregation Methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented.
Relationship Between Mineralisation Widths and Intercept Lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced Reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other Substantive Exploration Data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further Work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• There is a significant area of older workings in the north of the deposit where there is no drill hole information. Drill testing in this area has the potential to identify a Mineral Resource in lodes that were not stoped as part of the historical mining activity

Section 3 Estimation and Reporting of Mineral Resources – Gwalia Shallows and Gwalia Open Pit

Criteria	JORC Code explanation	Comments
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is captured through spread sheets and validated prior to loading into the SBM corporate database which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in an SQL database on secure company server. Validation of data included visual checks of hole traces, analytical and geological data and ad hoc validation of holes to original core photos and hard copy

Criteria	JORC Code explanation	Comments
		geological logs. • SGW data was migrated to the SBM database. Validation and correction of the transferred data was completed by SBM
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited site in September 2022 and completed inspection of drill core processing and visited available UG development faces
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Mineralisation domains are defined by abundance of quartz and quartz/carbonate veining, the presence of distinctive laminated veining (quartz/sericite/sulphides +/- au), strong potassic alteration, abundance of sulphides (commonly >3% pyrite) and elevated gold grade (>0.5g/t Au).
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation strikes at approximately 170 degrees over a distance of 160m and dip to the east 40 degrees. Mineralisation is conformable with the foliation of the Mine Sequence mafic schists. Individual lodes have an average horizontal width of 15m
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Below the 4708RL gold grade was estimated in Datamine Studio Rm using the following parameters: ○ Estimation cell size of 4mE x 8mN x 4mRL, 8mE x 16mN x 4mRL or 16mE x 32mN x 4mRL ○ Three pass estimation with expanded search ellipse was applied ensure estimation of the majority of blocks ○ A minimum number of composites of between 8 and 12 and maximum of between 20 and 24 was used for the first pass ○ A minimum number of composites of 6 and maximum of 12 was used for the second pass ○ A minimum number of composites of 4 and maximum of 10 was used for the third pass ○ Isolated high grade composites were capped prior to estimation (range from 47 to 125 g/t Au depending on domain) • Above 4708RL the estimation of gold used Isatis Neo software using the following parameters: ○ Estimation block size of 5m by 5m by 5m for the Open Pit resource ○ Estimation cell size of 4mE x 8mN x 4mRL, 8mE x 16mN x 4mRL or 16mE x 32mN x 4mRL for the underground resource ○ A minimum of 1 composite and maximum of 32 composites was used for grade estimation. Maximum of 20 used for narrow domains. A limit of 6 composites from a drillhole ○ Search radius of 60m by 30m by 15m was applied to the majority of domains ○ Search restriction was applied to limit the influence of outlier values • The models were validated by plotting composite and block model average values against Northing and RL for gold. • The models were internally peer reviewed
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on a dry basis
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Underground Mineral Resource is reported at a cut-off of 2.5g/t Au • Open Pit Mineral Resource is reported at a cut-off of 0.4g/t Au
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Open pit mining is assumed within an optimised pit shell determined at a AUD$ 2500 gold price • Outside the open pit shell the mining method is underground, open stoping with paste fill.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Metallurgical recovery has been proven to be consistently >95% during the processing of the deposit
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not*	• The project covers an area that has been previously impacted by mining. The tenement area includes existing ethnographic heritage sites. SBM have undertaken extensive Aboriginal Heritage Surveys within the tenements and management measures are in place.

Criteria	JORC Code explanation	Comments
	always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density was assigned for the lodes as follows o Main 2.73 o SGS 2.72 o SWB 2.78 o West 2.75 o Mine schist 2.79
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The resource is classified as a function of drill spacing, geological continuity and mining. Areas where grade control drilling has been completed to 20m x 30m and geological continuity has been established through mining are classified as Measured. Areas where drill density is 30m x 40m, 60m x 80m or less with high geological continuity are classified as Indicated and elsewhere where drill density is sparse classified as Inferred.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The Mineral Resource Estimates has been reviewed internally. The review covered all aspects of the estimate including source data, geological model, resource estimate and classification. No material issues were identified.
Discussion of relative accuracy/confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The resource estimate is a global estimate.

JORC Table 1 Checklist of Assessment and Reporting Criteria – HARBOUR LIGHTS
Section 1 Sampling Techniques and Data – Harbour Lights

Criteria	JORC Code explanation	Comments
Sampling Techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• For recent drilling completed by SBM, sampling boundaries are geologically defined and one metre in length unless a significant geological feature warrants a change from this standard unit. The upper or right-hand side of the core is routinely submitted for sample analysis, with each one metre of half core providing between 2.5 – 3 kg of material as an assay sample. Minimum sample length is 0.30 m. • The majority of the drilling was completed by Esso Exploration and Production Australia Inc. (Esso) between 1981 and 1985. Diamond and RC holes have generally been sampled on 1m intervals but no details on sampling protocols have been found.
Drilling Techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• SBM diamond drill holes used NQ2 (50.6mm) sized core (standard tubes). SBM surface drill holes have been down hole surveyed by north seeking gyro. Holes are orientated using a Reflex ACT II RD orientation tool. • Details of earlier RC and DDH drilling techniques have not been located. Diamond holes were surveyed by single shot camera.
Drill Sample Recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples*	• SBM core is metre marked and orientated and checked against driller's blocks to ensure that any core loss is accounted for. Sample recovery for all holes was good. • Details on earlier core recovery are unknown.

Criteria	JORC Code explanation	Comments
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All SBM holes are logged primarily for lithology, alteration and vein type/intensity which are key to modelling gold grade distributions. Validation of geological data is controlled via the use of library codes and reliability and consistency of data is monitored through regular peer review. • All holes were logged in fresh rock for lithology, alteration quartz-carbonate veining and sulphides
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• SBM half core is cut using a core saw before being sent to an accredited lab (SGS laboratory in Kalgoorlie) where the entire sample is crushed to achieve particle size <4mm followed by complete pulverisation (90% passing 75 µm). • Sub-sampling techniques and sample preparation for earlier holes are unknown but are assumed to conform to standard Eastern Goldfields practices of the time.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• SBM samples were analysed for gold using fire assay with a 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS). QC included insertion of 3 commercial standards (1 per 25 samples), use of barren flush material between designated high grade samples during the pulverising stage, re-numbered sample pulp residues re-submitted to original laboratory, and sample pulp residues submitted to accredited umpire laboratory, submission of residual (duplicate) half core from ore intervals. • The analytical method for earlier holes is unknown. Quality control was limited to analysis of pulp duplicates and the drilling of twin holes. SBM resampled selected intervals of earlier drill core which demonstrated good correlation with original assay values. This resampling demonstrated that there was no bias in the original analysis
Verification of sampling and assay	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Sampling data is recorded electronically in spreadsheets which ensure only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on secure company server and validated. • Earlier drilling data has been cross-checked against historic hard copy plots and reports.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• SBM collar location of holes are recorded by DGPS. Hole orientation was measured using TN14 Gyro compass. • Collar survey methods are unknown but are assumed to conform to standard Eastern Goldfields practices of the time.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Surface drilling has been completed on an approximate 25mN x 30mRL pattern decreasing to ~50mN x 100mRL below 170mbs. Mineralised areas have generally been sampled on 1 metre intervals..
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Drill holes are included to the west which interests the east dipping mineralisation perpendicular to lode orientation.
Sample security	• *The measures taken to ensure sample security.*	• Only SBM personnel or approved contractors are allowed on drill sites; drill samples are only removed from drill site by approved contractors to SBM's secure core logging/processing facility; cut core is consigned to accredited laboratories for sample preparation and analysis. • For earlier drilling it is assumed that the procedures applied were aligned to the industry practices prevailing at the time of sample collection, dispatch, sample preparation and analysis at accredited laboratories.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The logging and analytical data has been cross-checked against hard copy reports

Section 2 Reporting of Exploration Results – Harbour Lights

Criteria	JORC Code explanation	Comments
Mineral Tenement and Land Tenure Status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The reported resource is completely located within M37/251 and M37/1150 which are 100% owned by St Barbara Limited. The tenement is in good standing at the time of reporting.
Exploration Done by Other Parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The majority of the drilling was completed by Esso Exploration and Production Australia Inc. (Esso) between 1981 and 1985
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Gold mineralisation extends over 1km strike length and has been tested to vertical depth of 500m. It is hosted in a sheared ultramafic and overlying high Mg tholeiitic basalt which strike North-northwest and dip at 45 degrees to the east. Gold is associated with pyrite and arsenopyrite in isoclinally folded and boudinaged quartz veins and potassic alteration halos.
Drill Hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• No exploration results are presented.
Data Aggregation Methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented.
Relationship Between Mineralisation Widths and Intercept Lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced Reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other Substantive Exploration Data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further Work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further resource definition drilling is planned at this stage • Metallurgical test work and mine planning are in progress

Section 3 Estimation and Reporting of Mineral Resources – Harbour Lights

Criteria	JORC Code explanation	Comments
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is captured through spread sheets and validated prior to loading into the SBM corporate database which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in an SQL database on secure company server. Validation of data included visual checks of hole traces, analytical and geological data and ad hoc validation of holes to original core photos and hard copy geological logs.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited site on 16th September during the SBM drilling program. Drilling of hole HLGT0005 was in progress.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Mineralised domains are modelled based on the logging of sulphides (pyrite and arsenopyrite), quartz veining and potassic alteration halos • A central zone and several sub-parallel zones were modelled to constrain gold estimation. • Weakly mineralised talc chlorite zones were modelled as internal dilution inside the central mineralised domain
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation extends over a one kilometre strike and remains open at depth below the deepest hole intercept of 500m below surface. Mineralisation is parallel to the 45 degree dip of foliation with higher grade zones plunging to the south often associated with isoclinal fold hinges. • The central zone is up to 40m true width in places.

Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*
	• *The assumptions made regarding recovery of by-products.*
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).*
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
	• *Any assumptions behind modelling of selective mining units.*
	• *Any assumptions about correlation between variables.*
	• *Description of how the geological interpretation was used to control the resource estimates.*
	• *Discussion of basis for using or not using grade cutting or capping.*
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*
		• Gold grade was estimated using ordinary kriging with a parent cell size of 10mE x 10mN x 5mRL which is approximately half the drill spacing in the upper areas of the deposit.
		• Estimation was completed using Isatis Neo and Vulcan software.
		• Search parameters are as follows:
		  ○ Search orientation plane strike 20° dip 45° Plunge 160° (south)
		  ○ 150m by 150m by 30m in the hanging wall and central domains
		  ○ 200m by 200m by 30m in the footwall domains
		  ○ Composites selected 4 minimum and 32 maximum
		• Restricted search of 10m by 10m by 5m for composites greater than 0.4g/t Au for estimation of blocks outside modelled domains.
		• High grade cap of 40g//t Au was applied to composite grade prior to estimation
		• The model was validated by plotting composite and block model average values against Northing and RL for gold.

Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on a dry basis
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The model is reported at a cut-off of 0.4 g/t Au for oxide and 0.8g/t Au for fresh (sulphide) mineralisation
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The mining method is open pit.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Metallurgical recovery is expected to be 90% for oxide and 85.5% for sulphide based on initial test work.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and*	• The project covers an area that has been previously impacted by mining. The tenement area includes existing ethnographic heritage sites. SBM have undertaken extensive Aboriginal Heritage Surveys within the tenements and management measures are in place.

Criteria	JORC Code explanation	Comments
	processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• For the oxide material a bulk density of 2.4 was assumed • Bulk density values for fresh material are based on 1315 measurements on drill core with the following mean values applied by lithology and mineralisation groups • Mineralised domains range from 2.8 to 2.85 • Un-mineralised lithologies range from 2.7 to 2.85
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The resource is classified as a function of drill spacing, geological continuity and mining. • Areas where drill hole spacing is up to 50m by 50m and the average distance to composites is less than 50m are classified as indicated • At depth and at the edges of the deposit where the drill spacing is wider the mineralisation is classified as inferred.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The reporting of the company Mineral Resources is guided by the company's Mineral Resource Estimation System and is overseen by the Executive Leadership team. External reviews are completed approximately every 3 years. • The model was peer reviewed internally and by AMC consultants with no material issues identified.
Discussion of relative accuracy/confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The resource estimate is a global estimate. Grade control drilling will be required to define local ore/waste boundaries during open pit mining.

JORC Table 1 Checklist of Assessment and Reporting Criteria – TOWER HILL
Section 1 Sampling Techniques and Data – Tower Hill

Criteria	JORC Code explanation	Comments
Sampling Techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Sampling boundaries are geologically defined and mostly one metre in length unless a significant geological feature warrants a change from this standard unit. Post 2007 St Barbara Limited (SBM) drilling used Reverse Circulation drilling to obtain 1m samples through the mineralised zone. Most samples were dry, but where wet samples were encountered they were allowed to dry before being split by company personnel. Half core was sampled on largely 1m intervals based on geological boundaries. Core was cut along a plane passing through the basal orientation mark using a diamond saw.
Drilling Techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• SBM diamond holes typically used NQ (47.6mm) and HQ (63.5mm) sized core (standard double tubes). Core was oriented using Ace Core Orientation and Ezy Mark orientation tools. Drill holes were down hole surveyed by either north seeking gyro within the rods or by electronic multi-shot in open holes. Less than 10% of SBM holes

Criteria	JORC Code explanation	Comments
		were surveyed down hole using a Reflex Single Shot camera. RC holes used mainly 5½" reverse circulation face sampling hammers.
Drill Sample Recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Recovery of core from SBM drill holes was rarely less than 100%. Ore zone intersections are NQ and HQ (for geotechnical holes) sized diamond core using standard double tubes. Recovery information for historic holes is unavailable, although this data largely impacts the mined out portions of the project and is not material to the resource estimate
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All SBM holes were qualitatively and quantitatively logged for a combination of geological and geotechnical attributes. Pre-2007 holes were commonly logged for major lithology, alteration, vein minerals, and vein and sulphide percentage. Historic logging data was reviewed and deemed acceptable.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• SBM RC samples were recovered through a cone splitter to obtain mostly 1m samples from which 3 kg was pulverised to produce a 40g charge for fire assay. Half core was sampled on largely 1m intervals based on geological boundaries. Core was cut along a plane passing through the basal orientation mark using a diamond saw and was submitted for total pulverisation (85% passing 75 µm).
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Only limited information is available for holes drilled prior to 2007. SBM samples were analysed for gold using fire assay with a 40g charge and analysis by flame atomic absorption spectrometry. QC included insertion of 4 commercial standards per submission batch (4 commercial standards every 50 samples for diamond core), insertion of field duplicates every 40m and 2 blank control samples for every 100 samples. Sample pulp residues were submitted to an alternate laboratory. Results indicate that pulveriser bowls were adequately cleaned between samples, that analysis of gold was sound and re-analysis of pulps showed acceptable repeatability with no bias.
Verification of sampling and assay	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• SBM sampling data is recorded electronically which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on a secure company server. Statistical comparison of SBM (2007-2008) and pre-2007 assay results indicate that all data are compatible.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• SBM holes were surveyed using a Real Time Kinetic (RTK) GPS system. Historical drilling was located using mine surveyors and standard survey equipment.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Average data spacing of between 40m N-S by 30m E-W (up to 80m by 60m) is available for the bulk of the Tower Hill Resource. Drilling data is sufficient to establish continuity of the mineralised lodes.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Sampling is perpendicular to lode orientation and is well understood from past production.
Sample security	• *The measures taken to ensure sample security.*	• Company personnel or approved contractors only allowed on drill sites. Drill samples are only removed from drill site to secure sampling or core logging/processing facility; core logged and cut

Criteria	JORC Code explanation	Comments
		and consigned to accredited laboratories for processing.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Historical data was reviewed and extensively validated in 2003 including cross-checking data against original hard copy records where available. All data has been reviewed by a Competent Person who is satisfied that the data is sound and suitable for resource estimation.

Section 2 Reporting of Exploration Results – Tower Hill

Criteria	JORC Code explanation	Comments
Mineral Tenement and Land Tenure Status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The reported resource is completely located within M37/0055 which is 100% owned by St Barbara Limited. The tenement is in good standing at the time of reporting.
Exploration Done by Other Parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Drilling of the resource by other parties is discussed in the previous section.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Gold mineralisation at Tower Hill is hosted within a moderately (35 - 50°) east-dipping quartz vein package adjacent to the contact of granite and strongly foliated ultramafic rocks. Quartz-gold vein lodes strike north to north-northwest with strike lengths of up to 600 m and widths from less than a metre to a vein package with a horizontal width of up to 50 m.

Drill Hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are presented.

Data Aggregation Methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented.
Relationship Between Mineralisation Widths and Intercept Lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented.
Balanced Reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented.
Other Substantive Exploration Data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented.
Further Work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Results from drilling earlier in the year will be incorporated into the current Resource model

Section 3 Estimation and Reporting of Mineral Resources – Tower Hill

Criteria	JORC Code explanation	Comments
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Information initially captured through hard copy logs was subsequently entered into spread sheets and validated prior to loading into the SBM corporate database which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on a secure company server. Validation of data included visual check of drill hole traces and basic checks for overlapping sample and geological logging intervals.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person visited site when geological and resource models were reviewed between 2011 and 2013. Subsequent regular site visits have been made.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Mineralisation domain = MAIN was defined by quartz veining, the granite contact and structural controls as well as gold grade. Mineralisation domains = HW1, HW2 and HW3 were defined by quartz veining and gold grade.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Quartz-gold vein lodes strike north to north-northwest and dip moderately (30-50°) east with strike lengths of up to 600 m and widths from less than 1m to a vein package with a horizontal width of up to 50m. Mineralisation has been defined over a 1.1km strike length and has been tested to a maximum depth of approximately 525m below surface.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Gold grade was estimated by ordinary kriging 1m composites constrained by lode boundaries for a parent block size of x = 10m * y = 20m * z = 5m using Surpac 6.3. Search parameters reflect the moderate NE plunge control of mineralisation • All Domains – Rotation z = 29 degrees, x = -26 degrees, y = -24 degrees. Max. search distance = 200m. Major/Semi-Major anisotropy = 1.2; Major/Minor = 3. Min. samples = 12, Max. samples = 32. A top-cut of 60g/t was applied to Domain = MAIN composite data prior to estimation. No top-cuts were applied to the HW domain composite data. • Model was validated by plotting composite and block model average grades against northing and were reasonable.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The model is reported at a 0.4g/t Au cut-off which is close to the expected marginal cut-off grade based on a A$2,500/ounce gold price. The cut-off grade includes the following considerations: • Mining Cost - $3.67/t • Processing Cost (inc G&A and sustaining capital) - $23.90/t • Processing recovery – 91.7% • Pit slope angles of 41° footwall, 43° hangingwall
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The mining method is conventional open pit.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where*	• Processing recovery is 91.7%

Criteria	JORC Code explanation	Comments
	this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• The project covers an area that has been previously impacted by mining. The tenement area includes existing ethnographic heritage sites. SBM have undertaken extensive Aboriginal Heritage Surveys within the tenement and management measures are in place. • Agreements will be required to relocate infrastructure related to the handling and transportation of nickel concentrate on the eastern wall of the pit
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• The dry bulk density is estimated to be between 2.0 - 2.8g/cm3. This is based on weighing whole core samples in air and water for 87 samples.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The variogram model shows that 90% of total sill is reached at approximately 100m down plunge and within 45m perpendicular (D2) to this. Based on this, the average data spacing of between 40m by 30m (up to 80m by 60m) for the bulk of the Tower Hill Resource below the pit is considered adequate to classify the majority of the resource as Indicated. The down dip extensions to the resource, which are based on limited data, are considered Inferred.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The Tower Hill Resource was reviewed by Entech Mining Consultants in July 2021, who concluded that the model was suitable for open pit mining studies and recommended a review investigating sub-domaining of higher grade domains.
Discussion of relative accuracy/confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The resource estimate is a global estimate. Grade control drilling is completed in advance of development to improve local estimates of grade.

Section 4 Estimation and Reporting of Ore Reserves - Tower Hill

Criteria	JORC Code explanation	Comments
Mineral Resource Estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• Tower Hill deposit was mined in the 1980s by open pit but is currently not operating. It comprises a pit void adjacent to the town of Leonora filled with surface run-off and groundwater. The Mineral Resource estimate is based on a resource model developed by St Barbara Limited (St Barbara) in 2012 using ordinary kriging of composites of 1 m from 558 drill holes into parent blocks of 10 m x 20 m x 4 m. The Competent Person for the Mineral Resource estimate is Jane Bateman. AMC has reviewed the resource model and considers it suitable to be used as the basis for an Ore Reserve estimate. • The Mineral Resource is reported inclusive of the Ore Reserve.
Site Visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• One of the Competent Persons visited the site in early August 2022 to inspect site conditions, proximity to the town of Leonora and local infrastructure, pit wall conditions and discuss the technical programme with site personnel.
Study Status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a*	• A pre-feasibility study (PFS) was undertaken by St Barbara on the Tower Hill deposit, with AMC Consultants Pty Ltd (AMC) engaged to develop the mine plan and geotechnical recommendations to a PFS level and provide an Ore Reserve estimate. Ore from Tower Hill will be trucked 2 km to the nearby Gwalia processing plant for treatment. St Barbara announced the expansion of the Gwalia

Criteria	JORC Code explanation	Comments
	mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	processing plant from its current capacity of 1.4 Mtpa to 2.1 Mtpa. • The Tower Hill mine plan is technically achievable and economically viable.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• The cut-off grade of 0.4 g/t Au to define ore is the breakeven grade for variable costs and a share of fixed costs for general and administration (G&A) and through the Gwalia processing plant.
Mining Factors or Assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• Final pit limits were determined from pit optimisation using Whittle Four-X software, the diluted resource model, geotechnical parameters and metal prices, recoveries and operating costs agreed with St Barbara followed by final pit and stage design and mine scheduling. • Mining is proposed by contract truck and excavator mining, using drill and blast on 10 m benches and excavators operating on 5 m benches near surface for bulk waste mining and then transitioning to drill and blast on 5 m benches and excavators operating on 2.5 m benches. The Competent Persons consider the mining method to be appropriate for Tower Hill. The Tower Hill mine schedule will be integrated with other ore sources for the Gwalia mill so that the pre-strip for Tower Hill does not impact the Gwalia mill ore supply. • Geotechnical parameters used for Tower Hill were developed by AMC during the PFS based on two weathering zones, with inter ramp angles ranging from 33° (50° batter angles, 7 m berms and 10 m batter heights) to 55° (70° batter angles, 7 m berms and 20 m batter heights), which represents an overall slope of approximately 42° after inclusion of ramps. • Mine planning used a diluted resource model with allowance for losses incurred during mining modelled by applying a 2 m dilution skin to ore lodes. This resulted in ore loss of 7% and dilution of 21%. • Haul road widths of 32 m for dual access roads and 18 m for single access roads were used. Minimum mining width of 20 m was used and 40 m for pushbacks. • Inferred Mineral Resources were included in dilution analysis but excluded from pit optimisation and treated as waste. • No specific infrastructure is required for mining Tower Hill, although as the pit void is currently filled with water, dewatering pumps and lines are required to transfer the water to other nearby pit voids.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The free milling Tower Hill ore will be processed through the nearby upgraded 2.1 Mtpa Gwalia processing plant. The existing plant consists of a 1.4 Mtpa crushing and grinding circuit followed by a conventional gravity recovery and carbon-in-leach (CIL) circuit. • The existing plant utilises proven technology and the plant upgrade, has been defined through feasibility level studies and metallurgical testwork. • The metallurgical testwork undertaken for Tower Hill has been carried out on a large number of discrete variability samples from mostly ½ NQ diamond drill core samples across several test work programs carried out at reputable, industry leading metallurgical testing laboratories. Samples selected for testing were based on spatial and mineralogical distribution within the Tower Hill economic pit shell. • There are no known deleterious elements and no allowance is made in the Ore Reserve estimate for deleterious elements. • Tower Hill was previously mined in the 1980's and the metallurgical characteristics of the ore were well known. Formulae were applied to estimate gold recovery based on life-of-mine feed grades, with an average recovery of 93.4%. No bulk sampling was required. • Feed to the Gwalia processing plant will be a blend of multiple St Barbara ore sources of varying grade and mineralogy. No specification will be required for the Gwalia plant feed once the refractory components are installed as part of the upgrade.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• Tower Hill sits on a granted mining lease and the area has previously been significantly impacted by mining. Study work is currently in progress to complete a mining feasibility study including characterisation of waste rock and waste dump design. A PFS level study has recently been completed for a Life of Mine tailings storage which would accommodate all of Tower Hill's mine tailings. Approvals are currently in place for the 1.4 Mtpa process plant and associated infrastructure (TSF, power station) that processes the Gwalia ore. Current focus is on obtaining approvals for the 2.1 Mtpa process plant upgrade and progressing the environmental permitting study work (including noise, biological studies, hydrogeology, dewatering) for the Tower Hill open pit mining in parallel with the FS study

Criteria	JORC Code explanation	Comments
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• Tower Hill is a brownfields development located adjacent to the town of Leonora and the operating Gwalia underground mine. Power, water, telecommunications are available at or near the site and accommodation is available in Leonora at St Barbara's accommodation village. An airstrip is located adjacent to the site to transport the expected fly-in fly-out workforce.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Capital costs were derived from the Tower Hill PFS by Mintrex and other specialist service providers. • Sustaining capital cost of $1.82/t for processing, tailings storage, and G&A was estimated by St Barbara and specialist service providers. • Operating costs for mining averaged $5.05/t and were developed by AMC from a first principles mining cost model calibrated from contract mining costs supplied by St Barbara. Fixed annual operating costs for ore processing of $18.8M and G&A of $21.9M were developed by Mintrex and St Barbara respectively as part of the PFS and were used for pit optimisation, despite the shared nature of these costs with other Gwalia plant contributors. Variable ore processing costs of $14.53/t feed were developed by Mintrex as part of the PFS. • No allowance was made for deleterious elements. • All costs and revenues were denominated in Australian dollars and no exchange rates were used. • Run-of-mine ore pad rehandle costs of $0.65/t was estimated by St Barbara and transportation charges for ore from Tower Hill to Gwalia was estimated at $2.87/t by St Barbara. • Treatment and refining charges of $1.05/oz Au were provided by St Barbara based on costs for their existing operations. • West Australian Government of 2.5% and third-party royalties of 1.5% were included based on statutory or agreed rates as appropriate.
Revenue Factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• The metal price of A$2,000/oz Au was provided by St Barbara based on corporate forecasts and is similar to recent metal price forecasts used by other similar gold mining operations. • No other revenue factors were used.
Market Assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• The product from processing of Tower Hill ore is gold bullion, for which a ready market exists and is traded on an open and transparent market. • Gold bullion is marketed to precious metal refineries (Perth Mint). Customer and competitor analysis is not required. • Price forecasts were derived from St Barbara corporate forecasts and are similar to prices used for other similar and recent gold mining projects. • No specification is required for gold bullion.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• Economic analysis used metal prices, operating and capital costs, and metal recoveries described with a 6% discount rate to estimate net present values (NPVs). • NPV were significantly positive and demonstrate that extraction of Tower Hill Ore Reserve can be reasonably justified.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• St Barbara are in liaison with and have good relationships with all key stakeholders. Relevant agreements are expected to be in place prior to commencement of mining.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• There are no known naturally occurring risks other than those risks present at any other mine site in the region, such as storms and bushfires. • St Barbara is working with the Darlot People who have recently received Native Title recognition over the Leonora area. It is anticipated that an agreement will be entered into within the timeframes anticipated. There are no material marketing agreements. • St Barbara is currently working with Government and non-Government stakeholders on the relocation of rail loading facilities and the rail line. The Competent Persons consider that there are reasonable grounds to expect that all necessary approvals will be received within the timeframes anticipated in the PFS.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The classification of the underlying Mineral Resource estimate was accepted in the classification of Ore Reserve estimate. • The classification reflects the Competent Persons view of Tower Hill. • No Probable Ore Reserve was derived from Measured Mineral

Criteria	JORC Code explanation	Comments
	• *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	Resource.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• No audits or reviews have been undertaken on the Tower Hill Ore Reserve.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The level of confidence in operating costs, geotechnical parameters, metal recoveries, and other technical modifying factors is at least at a PFS level of assessment and in the opinion of the Competent Persons, modifying factors applied to estimate the Ore Reserve are appropriately estimated and reasonable. • There is some uncertainty around the impact that blasting, noise, dust, and night-time noise levels in proximity to the town will have on operations, but competent management procedures should negate this uncertainty. • The Ore Reserve estimate relates to global estimates in conversion of Mineral Resource to Ore Reserve, due largely to spacing of drill data, on which estimates are based, relative to intended local selectivity of mining operations. Diluting methodology applied by way of a dilution skin around a parent sized resource block support this. • Metal prices are subject to market forces and therefore present an area of uncertainty. • In the opinion of the Competent Persons, there are reasonable prospects to anticipate that relevant legal, environmental, and social approvals to operate will be granted within the project timeframe.

JORC Table 1 Checklist of Assessment and Reporting Criteria – APHRODITE
Section 1 Sampling Techniques and Data – Aphrodite

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The mineralisation was primarily sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on nominal 40m x 40m (N x E) grid spacing. The holes were generally drilled towards grid east at varying angles to optimally intersect the mineralised zones. • Complete details are un-available for historic drilling. • BDC RC recovered chip samples were collected and passed through a cone splitter. • Limited numbers of field duplicates and screen fire assays have been undertaken to support sample representivity. • BDC DC core has been sampled by submission of a minimum of cut quarter core. • All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverised in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential assay at a later date. The BDC DC samples are collected at nominated intervals by BDC staff from core that has been cut in half and transported to a Kalgoorlie based laboratory. Samples were oven dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverised in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential additional assay at a later date.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• There are holes drilled by previous owners over the area prior to mid 2010. These holes are occasionally without documentation of the rig type and capability, core size, sample selection and handling. • For BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is HQ size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter). • All BDC drill core is orientated by the drilling contractor, usually every 3m run. • There are no new results announced in this announcement.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed*	• All BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling

Criteria	JORC Code explanation	Commentary
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilised for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database. • The BDC DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained. • BDC RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilises a face sampling hammer which is industry best practice and the contractor aims to maximise recovery at all times. RC holes are drilled dry whenever practicable to maximise recovery of sample. • The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings. • Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All BDC RC samples are geologically logged directly into hand-held devices generally using Geobank Mobile software . • All BDC DC is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralisation, shearing/foliation and any other features that are present • All BDC DC is photographed both wet and dry after logging but before cutting. • The entire lengths of BDC RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length and any core loss or voids intersected are recorded.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• BDC Exploration results reported are for a minimum of quarter cut drill core taken from the right hand side of the core looking down hole. Core is cut by BDC staff onsite at the core cutting facility. • All BDC RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database. • The BDC RC samples are sorted, oven dried, the entire sample is pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 40 or 50g fire assay charge. • The BDC DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for a 40g or 50g fire assay charge. • BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. BDC inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 40 or 50g fire assay batch. The laboratory also uses barren flushes on the pulveriser. • In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number.

Criteria	JORC Code explanation	Commentary
		• For DC, historically no core duplicates (i.e. half core) have been collected or submitted. BDC inserts blank samples and standards at the rate of about 1 in 20. The results and core used for this announcement will undergo metallurgical testwork, this will involve performing check assays on the samples which will act as a field duplicate. • The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralisation located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been SGS Australia, Bureau Veritas Australia and Intertek. No complete details (i.e. most details captured, but not all details for all holes) of the sample preparation, analysis or security are available for either the historic AC, DD or RC drilling results in the database. • The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralisation style. The technique involves using a 40g or 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine. • The QC procedures are industry best practice. The laboratories are accredited and use their own certified reference materials. • BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures BDC examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• BDC's Exploration Manager and site geologist have inspected RC chips and drill core in the field to verify the correlation of mineralised zones between assay results and lithology/alteration/mineralisation • A number of RC holes have also been drilled that confirmed results obtained from historical drillholes. No holes have been directly twinned, there are however holes within 12m of each other. • Primary data is sent digitally every 2-3 days from the field to BDC's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• All drill holes have their collar location recorded by a contract surveyor using RTK GPS. Downhole surveys are completed at least every 30m downhole. Incomplete down hole surveying information is available for the historic RC or DD drilling. No detailed down hole surveying information is available for the historic RC or DD drilling. • BDC routinely contracted down hole surveys during the programmes of exploration drilling for each RC and DC drill hole completed using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications. The current drill program was downhole surveyed by the drill contractor using a north seeking gyro. • All drill holes and resource estimation use the MGA94, Zone 51 grid system. • The topographic data used was obtained from consultant surveyors and is based on a LiDAR survey flown in 2012. It is adequate for the reporting of Exploration Results and subsequent Mineral Resource estimates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The nominal exploration drill spacing is 40m x 40m with many E-W cross- sections in-filled to 20m across strike. This has been infilled with variable spacing for resource estimate purposes to 20 x 20m. There are no new exploration results reported in this announcement. The drill spacing, spatial distribution and quality of assay results is sufficient to support the JORC classification of

Criteria	JORC Code explanation	Commentary
		material reported previously and is appropriate for the nature and style of mineralisation being reported. • The majority of RC holes were sampled at 1m, but when this isn't the case, sample compositing to 4m has been applied. • The BDC DC drilling has no sample composites applied to the raw sample assays. Any results reported are length weighted averages.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of previous drilling is to grid east and west. The bulk of the mineralised zones are perpendicular to this drilling direction. • The current drilling is oriented towards grid east (89 degrees magnetic) or grid west (269 degrees magnetic). • There is no sampling bias recognised from the intersection angle of the drilling and the lode orientation.
Sample security	• *The measures taken to ensure sample security.*	• RC samples are delivered directly from the field to the Kalgoorlie laboratory by BDC personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an BDC generated sample submission list and reports back any discrepancies. • Drill core is transported daily directly from the drill site to BDC's core processing facility by BDC personnel. The core is then placed on racks and processed until it requires cutting. Core is then cut onsite by BDC's staff. The core is then assayed in Kalgoorlie by the assay laboratory after transport by BDC staff with no stops or detours.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Internal audits of sampling techniques as well as data handling and validation was regularly conducted by Aphrodite Geologists prior to the merger, as part of due diligence and continuous improvement and review of procedures.

Section 2 Reporting of Exploration Results – Aphrodite

(Criteria listed in the preceding section also apply to this section.)

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral tenement and land tenure status</td><td>• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.
• The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</td><td>• The results reported in this Announcement are on granted Mining Tenements held by Aphrodite Gold Pty Ltd, a wholly owned subsidiary of Bardoc Gold Limited. A 2.5% State Royalty and 2.5% Franco Nevada Royalty exist on gold ores mined from the Aphrodite Deposit.
<table>
<tr><td>Tenement</td><td>Holder</td><td>Area (Ha)</td><td>Expiry Date</td></tr>
<tr><td>M24/662</td><td>Aphrodite Gold Pty Ltd</td><td>363.3</td><td>27/06/2028</td></tr>
<tr><td>M24/720</td><td>Aphrodite Gold Pty Ltd</td><td>995.4</td><td>20/08/2028</td></tr>
<tr><td>M24/681</td><td>Aphrodite Gold Pty Ltd</td><td>446.3</td><td>09/08/2030</td></tr>
</table>
• At this time, the tenements are in good standing. There are known existing impediments to obtain a license to operate a mine.</td></tr>
<tr><td>Exploration done by other parties</td><td>• Acknowledgment and appraisal of exploration by other parties.</td><td>• Project has had many owners over more than 20 years and has been reviewed multiple times. Historic documents are not always available.
• Drilling, geological, sampling and assay protocols and methods were to industry standard and adequate for inclusion in Mineral Resource Estimation.</td></tr>
<tr><td>Geology</td><td>• Deposit type, geological setting and style of mineralisation.</td><td>• Discontinuous shoots of low to moderate tenor gold mineralisation within two broader sub-parallel mineralised structural zones. Mineralisation is beneath a substantial thickness of leached overburden. Free milling in upper oxidised and partially oxidised zones but mostly refractory in the primary zone.</td></tr>
<tr><td>Drill hole Information</td><td>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
○ easting and northing of the drill hole collar
○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
○ dip and azimuth of the hole
○ down hole length and interception depth
○ hole length.
• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</td><td>• No exploration results are presented</td></tr>
<tr><td>Data aggregation methods</td><td>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</td><td>• No exploration results are presented</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	• *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Future work will focus on additional drilling for metallurgical testwork and resource infill

Section 3 Estimation and Reporting of Mineral Resources – Aphrodite – Open Pit (OP)

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited site.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is complex, however recent structural knowledge has elevated confidence in ore lode geometries. There is good continuity of mineralisation established by 20m x 20m close spaced drilling near surface and reasonable continuity from 40m x 40m drilling. Ore shoot geometries are predicted from structural evidence and confirmed from geostatistics • The use of historical drilling provides a level of uncertainty as the company cannot validate the collar location and downhole survey data. • The lithology units have been modelled using drilling data and consist of a north-south striking, sub-vertical sequence of sediments, volcaniclastics and porphyry. Mineralisation is oriented NNW within 2 major shear systems. Individual structures are evident within the shear systems and are associated with veining, alteration, foliation, and gold. Geological information such as veining, alteration and structure, plus gold and Arsenic grades, were used to guide the interpretation. • Structural continuity of the shear systems is extensive. The grade continuity within the shears is less continuous. • The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a ~0.3g/t Au

Criteria	JORC Code explanation	Commentary
		cut off which represents the mineralised shear in all modelled domains.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation within the 2 major shears extending for ~1.6km along strike and 500m in elevation. The shears are separated by ~120m. Locally, between the major shears are mineralised linking structures. An extensive supergene blanket extends for up to 400m east of the deposit. Depth below surface to the top of the resource is between 35 and 60m.

Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*
	• *The assumptions made regarding recovery of by-products.*
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).*
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
	• *Any assumptions behind modelling of selective mining units.*
	• *Any assumptions about correlation between variables.*
	• *Description of how the geological interpretation was used to control the resource estimates.*
	• *Discussion of basis for using or not using grade cutting or capping.*
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*
		• BDC has used 3DM wireframes to constrain the mineralised shear zones. All lodes have been interpreted on a sectional basis using the available exploration drilling data on variable spacing.
		• Raw assay samples were composited to 1m. Compositing started where each drill hole entered a mineralised wireframe and continued until exiting the wireframe. A minimum composite width of 0.7m was chosen and any residual composites were averaged with the previous sample.
		• Given the sometimes relatively wide drill spacing, it was decided to undertake grade estimation using the non-linear Localised Uniform Conditioning ("LUC") method. This method is suited to estimating grades into SMU scale blocks from widely spaced data.
		• The following criteria were considered when choosing gold grade top cuts:
		  • The coherence and stability of the upper tail of the gold grade distribution.
		  • Visual inspection of the spatial location of outlier values.
		• The statistics show that in most cases there is only a small reduction in mean grade and variability following top cutting.
		• The LUC estimates were implemented using the Isatis NeoTM software package before being transferred into a Micromine™ block model. SupervisorTM software used for geostatistics, variography and block model validation.
		• No consideration has been made to by-products.
		• Deleterious elements (Sulphur and Arsenic) have been estimated in this model for use in upcoming metallurgy studies, but not used in the reporting of resources.
		• The estimation panel size used was 10mE x 20mE x 5mRL. An SMU block size of 2.5mE x 5mN x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size is considered appropriate for the deposit and predicted mining fleet. While the data spacing in areas other than near surface would be considered too wide for such a small block size if conventional linear estimation methods were used, BDC has used the LUC method, which is suited to estimating the grade distribution of smaller blocks using wide spaced data.
		• Panel estimates were completed using Ordinary Kriging, both within the Uniform conditioning step.
		• The UC Panel estimates uses a minimum of seven samples, with an optimal three samples per drillhole. Four sectors are used, and each has an optimum number of seven samples per sector.
		• Search orientations are largely based on variogram orientations, with maximum ranges set high to ensure blocks are estimated in the one pass. This leads to a relatively smooth panel estimate.
		• Support correction between point grades and panel grades are used in assigning SMU grades within the Localisation step.
		• Validation was completed on both panel models and the localisation to SMU's
		  • visually, comparing block estimated grades to local drilling.
		  • Using swath plots on a N-S, E-W and depth and
		  • Comparing estimated grades to composite grades on a domain by domain basis.
		  • Comparison to the previous model to understand changes

Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The open pit-able MRE has been reported above a 0.4g/t Au cut-off and above an RL which represents 235m below surface. The underground resource is reported above a 1.2g/t cut-off and below an RL which represents 235m below surface. It should be note that the LUC estimation method implies a mining selectivity which is unlikely to be achieved during underground mining.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining*	• This MRE has been undertaken on the assumption of open pit mining methods, the selection of SMU size was based on the scale of mining equipment likely to be used.

Criteria	JORC Code explanation	Commentary
	methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• The Aphrodite deposit has never been mined. BDC has conducted extensive metallurgical test work on all lithology types from various weathering profiles. The testwork has concluded the fresh and transitional ore is refractory in nature. There have been many generations of testwork and several processing methods investigated, currently BDC has determined that a flotation concentrate of sulphide ore will be produced and sold to 3rd parties. Recoveries, Capital Costs and Operating Costs will be based on this flow sheet, with concentrate tails being processed through a CIL process facility.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Characterisation of representative waste rock samples at Aphrodite indicated that there is Potentially Acid Forming (PAF) material in the Alpha and Phi transition materials. Volumes of PAF material are to be confirmed with subsequent testing, however, are not expected to be significant. PAF material will be subject to a containment cell located within the waste dump, which will be adequately capped with fresh rock such that drainage is managed. • Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailing dams, and their impact to native vegetation, faunal habitat, surface hydrology and groundwater dependent ecosystems.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Dry bulk density estimates have been made for mineralisation according to position within the oxidation profile and mineralised domain. • Estimates are based on historic core measurements and gamma-gamma logging for underground extractable material and on recent core measurements alone for surface extractable material. • Where deemed appropriate, waxing of cores has been undertaken prior to measurement by water displacement.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The geological model and continuity of the mineralisation is currently reasonably well understood The MRE is classified into indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. The classification is based on drill hole spacing, geological continuity and estimation quality parameters. • Indicated – Areas with drill spacing up to approximately ~40mE x 40mN and with reasonable confidence in the geological interpretation. • Inferred – Areas with drill spacing up to ~80mE x 80mN. • There is a high level of confidence in input data, geology, and gold grades. At depth where drilling is more separated, confidence in geological and grade continuity is reduced and this is accounted for by having an inferred or unclassified classification. • The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 29 March 2021 .ASX:BDC 'Bardoc DFS Delivers 1Moz Ore Reserve to underpin new long-life, high-margin WA Gold Project' The competent person has reviewed this work

Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*
		• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code.
		• Several measures were incorporated in the MRE to provide confidence in the estimate including:
		  • The estimate has used top-cuts to restrict the influence of high grade samples without having a detrimental effect on metal content.
		  • Adoption of the LUC estimation method provides an estimate of tonnages and grades at the SMU scale which can be achieved during mining.
		• The block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size.
		• Aphrodite is previously unmined, there are no production records with which to compare this estimate to.

Section 3 Estimation and Reporting of Mineral Resources – Aphrodite – Underground (UG)

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited site.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is complex, however recent structural knowledge has elevated confidence in ore lode geometries. There is good continuity of mineralisation established by 20m x 20m close spaced drilling near surface and reasonable continuity from 40m x 40m drilling. Ore shoot geometries are predicted from structural evidence and confirmed from geostatistics • The use of historical drilling provides a level of uncertainty as the company cannot validate the collar location and downhole survey data. • The lithology units have been modelled using drilling data and consist of a north-south striking, sub-vertical sequence of sediments, volcaniclastics and porphyry. Mineralisation is oriented NNW within 2 major shear systems. Individual structures are evident within the shear systems and are associated with veining, alteration, foliation, and gold. Geological information such as veining, alteration and structure, plus gold and Arsenic grades, were used to guide the interpretation. • Structural continuity of the shear systems is extensive. The grade continuity within the shears is less continuous. • The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a ~1g/t Au cut off which represents the mineralised shear in all modelled domains.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation within the 2 major shears extending for ~1.6km along strike and 500m in elevation. The shears are separated by ~120m. Locally, between the major shears are mineralised linking structures. An extensive supergene blanket extends for up to 400m east of the deposit. Depth below surface to the top of the resource is between 35 and 60m.

Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*
	• *The assumptions made regarding recovery of by-products.*
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).*
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
	• *Any assumptions behind modelling of selective mining units.*
	• *Any assumptions about correlation between variables.*
	• *Description of how the geological interpretation was used to control the resource estimates.*
	• *Discussion of basis for using or not using grade cutting or capping.*
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*
		• BDC has used 3DM wireframes to constrain the mineralised shear zones. All lodes have been interpreted on a sectional basis using the available exploration drilling data on variable spacing. Lode interpretations were modelled using Leapfrog Geo vein modelling tools.
		• Estimation was completed using Ordinary Kriging (OK) using Datamine RM software
		• Variography, using composited drill data, was completed in Snowden Supervisor software.
		• Raw assay samples were composited to 1m. Compositing started where each drill hole entered a mineralised wireframe and continued until exiting the wireframe. A minimum composite width of 0.1m was chosen and any residual composites were averaged with the previous sample.
		• The following criteria were considered when choosing gold grade top cuts:
		  ◦ The coherence and stability of the upper tail of the gold grade distribution, and the effect of outlier values to mean and variance.
		  ◦ Visual inspection of the spatial location of outlier values;
		• Using Kriging Neighbourhood Analysis (KNA) a block size of 5mE x 5mE x 5mRL was selected to reflect the drill spacing noted in the well-informed areas. The spacing is arguably too fine for the lesser-informed, lower confidence areas, but this is reflected in the classification.
		• Original search ellipse dimensions and orientation reflect the parameters derived from the variography analysis.

Criteria	JORC Code explanation	Commentary
		• A process of Dynamic Anisotropy (DA) applied where orientations adjusted locally based on the orientation of lode wireframes. • Original search samples parameters derived from KNA. Maximum of 3 samples per drillhole, with 5 samples required as a minimum and 15 samples as a maximum. • A process of Localised Kriging Neighbourhood Optimisation (LKNO) applied where samples counts (minimum and maximum) adjusted iteratively to ensure each block has the optimal parameters applied. • Classification was used to mitigate risk associated with less well estimated blocks. • Validation was completed using multiple approaches including: • Global mean analysis • Local Mean analysis (using swath plots NS, EW, and rl) • Visually, comparing block estimated grades to local drilling. • No consideration has been made to by-products. • Sulphur and Arsenic zones were calculated using a Categorical indicator approach, and estimated using Ordinary kriging.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The underground resource is reported above a 1.7g/t cut-off and below an RL which represents 235m below surface.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• This MRE has been undertaken on the assumption of underground mining methods. Further work, including additional drilling, will determine the optimal mining method for this material.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• The Aphrodite deposit has never been mined. BDC has conducted extensive metallurgical test work on all lithology types from various weathering profiles. The testwork has concluded the fresh and transitional ore is refractory in nature. There has been many generations of testwork and several processing methods investigated but currently BDC has determined that a flotation concentrate of sulphide ore will be produced and sold to 3rd parties. Recoveries, Capital Costs and Operating Costs will be based on this flow sheet, with concentrate tails being processed through a CIL process facility.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Characterisation of representative waste rock samples at Aphrodite indicated that there is Potentially Acid Forming (PAF) material in the Alpha and Phi transition materials. Volumes of PAF material are to be confirmed with subsequent testing, however, are not expected to be significant. PAF material will be subject to a containment cell located within the waste dump, which will be adequately capped with fresh rock such that drainage is managed. • Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailing dams, and their impact to native vegetation, faunal habitat, surface hydrology and groundwater dependent ecosystems.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Dry bulk density estimates have been made for mineralisation according to position within the oxidation profile and mineralised domain. • Estimates are based on historic core measurements and gamma-gamma logging for underground extractable material and on recent core measurements alone for surface extractable material. • Where deemed appropriate, waxing of cores has been undertaken prior to measurement by water displacement.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The geological model and continuity of the mineralisation is currently reasonably well understood The MRE is classified into indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. The classification is based on drill hole spacing, geological continuity and estimation quality parameters. • Indicated – Areas with drill spacing up to approximately ~40mE x 40mN and with reasonable confidence in the geological interpretation. • Inferred – Areas with drill spacing up to ~80mE x 80mN. • There is a high level of confidence in input data, geology, and gold grades. At depth where drilling is more separated, confidence in geological and grade continuity is reduced and this is accounted for by having an inferred or unclassified classification.

Criteria	JORC Code explanation	Commentary
		• The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 29 March 2021 .ASX:BDC 'Bardoc DFS Delivers 1Moz Ore Reserve to underpin new long-life, high-margin WA Gold Project' The competent person has reviewed this work

Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*
		• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code.
		• Several measures were incorporated in the MRE to provide confidence in the estimate including:
		  • The estimate has used top-cuts to restrict the influence of high grade samples without having a detrimental effect on metal content.
		  • Adoption of the LUC estimation method provides an estimate of tonnages and grades at the SMU scale which can be achieved during mining.
		• The block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size.
		• Aphrodite is previously unmined, there are no production records with which to compare this estimate to.

Section 4 Estimation and Reporting of Ore Reserves – Aphrodite Underground

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• Bardoc Gold Mineral Resource as reported in March 2021 • The Mineral Resources are reported inclusive of the Ore Reserve.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has conducted multiple site visits and is familiar with the region and is comfortable relying on site visit reports from other independent consultants and site surveys in determining the viability of the Ore Reserve.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• A Definitive Feasibility Study carried out by Bardoc and historical and forecast production costs for Leonora provided the basis for costs, modifying factors and parameters resulting in an Ore Reserve mine plan that is technically achievable and economically viable.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Definitive Feasibility costs, revenue factors and physicals form the basis for Cut Off Grade calculations. • Mill recovery is calculated based on metallurgical testwork carried out as part of the Definitive Feasibility Study. • A gold price of A$2,000 / oz (US$1,500/oz) was assumed for the Cut Off Grade calculations. • For refractory ore, cut-off grades include the concentrate costs which include logistics, insurances, treatment costs, penalties and payabilities. • The underground COG of 1.9 g/t was used as the basis for initial stope design, with all designs assessed by detailed financial analysis to confirm their profitability in consideration to the works required to access and extract them.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• Mineral Resource material was converted to Ore Reserves after completing an optimisation process, detailed mine design, schedule and associated financial assessment. • The underground ore reserve is planned to be mined using conventional underground mining methods. The mining will consist of Longhole open Stoping (LHOS) on 20m level spacing with voids remaining open and insitu rock rib and sill pillars used for stability. Mining operations will be undertaken by an experienced and reputable mining contractor using a conventional fleet of twin boom jumbo's, 76mm production drills, 10-15t loaders and 60 tonne trucks. • The mining methods chosen are well-known and widely used in the local mining industry and production rates and costing can be predicted with a suitable degree of accuracy. Suitable access exists to the mine. • Underground designs are based on geotechnical parameters provided by independent consultants PETER O'BRYAN &

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>Associates.
• Stope parameters used in the underground reserves are 20m level spacing (height), maximum 25m strike length, staggered rib pillars (minimum 1:1 width to length ratio) with sill pillars less than or equal to 80m spacing.
• Underground grade control will be carried out using diamond drill holes from stockpiles off the decline. The costs have been based off estimated drilling requirements and current diamond drill rates incurred by the company.
• Mineral Resources used for optimisation were those detailed previously. Cut-off grades and geotechnical inputs used for optimisations were also applied as detailed previously.
• A 10% waste (i.e. zero grade) dilution factor was applied to underground stoping and 10% waste dilution factor was used for mine development.
• In-situ stope recovery was assumed at 95%; Stope recovery where rib pillars are required was 0%; Stope recovery on levels where sill pillars are left varied from 30% to 0%, based on stope widths and panel heights. It was assumed all development is fully recovered.
• A minimum mining width of 2.5m was applied to underground stopes.
• Inferred Resources were not taken into account during valuation in the underground design process, and as such did not have an impact on stope shape or development design. Any Inferred material contained within underground designs was treated as waste (i.e. zero grade).
• Aphrodite is a greenfields site and will require all surface and underground infrastructure to be installed, including offices, workshops, first aid facilities, power supply, water management, stores, communications, fuel farm, magazines, waste dumps, run-of-mine (ROM) pads and access road upgrades. This has been allowed for in the Definitive Feasibility Study.</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.
• Whether the metallurgical process is well-tested technology or novel in nature.
• The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.
• Any assumptions or allowances made for deleterious elements.
• The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.
• For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</td><td>• The refractory material will undergo flotation to form a concentrate which is proposed to be sold under a concentrate sale offtake agreement for downstream smelting and refining.
• Aphrodite underground is 100% refractory material.
• The Reserves includes construction of a floatation circuit to be located at the Gwalia processing facility 165km from the Aphrodite Mine Site. Ore will be transported by an external contractor, utilising road trains to the mill ROM. The free milling and refractory ore will be processed separately in campaigns.
• CIL and flotation is a standard and common gold extraction process for free milling and refractory ores.
• A total of 24 Aphrodite composites were used in the DFS testwork program. The composites have covered spatial variability samples including lithologies at different locations within Alpha and Phi lodes as well as high and low grade and waste material. The lithologies consist of coarse sediments, fine sediments, intermediate volcaniclastic rock. The program involved mineralogy, comminution, flotation, gravity and leaching investigations.
• The DFS flotation testwork results were used to develop models which utilise sulphur, gold and arsenic feed grades to determine the mass, gold and arsenic recovery and the grade of gold and arsenic in the concentrate. The models are shown below where [Au] is the gold head grade in g/t, [S] is the sulphur head grade in % and [As] is the arsenic head grade in %
<table>
<tr><th colspan="2">Model</th></tr>
<tr><td>Mass Recovery</td><td>2.0128 x [S] + 1.8576</td></tr>
<tr><td>Gold Models</td><td></td></tr>
<tr><td>Rougher Tail Gold Grade</td><td>0.039 x [Au]</td></tr>
<tr><td>Cleaner Tail Gold Grade</td><td>$([\mathrm{Au}] \times 0.2044 e^{0.754[S]})/100$</td></tr>
<tr><td>Flotation Gold Recovery</td><td>([Au] – (Rougher Au Tail +Cleaner Au Tail)) / [Au]</td></tr>
<tr><td>Concentrate Gold Grade</td><td>([Au] x Flotation Au Recovery %) / Mass Recovery %</td></tr>
<tr><td>CIL Tailings Gold Grade</td><td>0.039 x [Au]</td></tr>
<tr><td>Arsenic Models</td><td></td></tr>
<tr><td>Rougher Tail Arsenic Grade</td><td>0.024 x [As]</td></tr>
<tr><td>Cleaner Tail Arsenic Grade</td><td>$([\mathrm{As}] \times 0.151 e^{0.974[S]})/100]$</td></tr>
<tr><td>Flotation Arsenic Recovery</td><td>([As] – (Rougher As Tail +Cleaner As Tail)) / [As]</td></tr>
</table></td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		Concentrate Arsenic Grade: ([As] x Flotation As Recovery %) / Mass Recovery % • These were applied to the Geology models and mining schedule to determine the modelled life of mine flotation performance. The life of mine results are shown below: - Mass recovery – 4.4% - Gold recovery – 95.6% - Gold grade – 57 g/t - Arsenic Grade – 2.7% • No deleterious elements were identified from the mineralogical/metallurgical assessments that impact on process selection.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• Baseline environmental studies have been completed for Aphrodite including vegetation and landform, macro fauna, subterranean fauna, short range endemics, surface hydrology, hydrogeology, waste rock classification and Aboriginal heritage surveys. Clearing Permits have been obtained for the Aphrodite mining operation and a Mining Proposal has been submitted and is its final stages of review from DMIRS. There are no known reasons why mining approvals will not be granted for the Aphrodite underground operation. • Characterisation of representative waste rock samples at Aphrodite indicated that there is Potentially Acid Forming (PAF) material in the Alpha and Phi materials. Volumes of PAF material are to be confirmed with subsequent testing, however, are not expected to be significant. PAF material will be subject to a containment cell located within the waste dump, which will be adequately capped with fresh rock such that drainage is managed. • Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailing dams, and their impact to native vegetation, faunal habitat, surface hydrology and groundwater dependent ecosystems.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• The Aphrodite project is located 70km from the city of Kalgoorlie, adjacent the Goldfields highway, a sealed all-weather highway that is frequently travelled. This provides ready access to the site for transportation of infrastructure and consumables for the project. • The infrastructure is designed to be located on tenement areas owned by Bardoc Gold. • Labour will be sourced from the nearby town of Kalgoorlie, where available, or on a fly-in fly-out basis through the Kalgoorlie airport, housing the relevant people within the city of Kalgoorlie. • Power will be provided by on site natural gas and diesel generators. • Water will be sourced from the nearby Scotia Borefield.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Capital costs for the project have been provided by several external studies completed for the project including: • Mintrex – Processing Plant • AQ2 – Water Supply • IME Consultants – Surface Mining infrastructure • Capital costs are based on vendor supplied quotations and / or the consultancies cost database. • Capital costs include: o Flotation circuit addition at Gwalia; o Mining Infrastructure – Workshops, fuel bays, washdown bays, offices, magazines, dewatering infrastructure, power infrastructure, - Power Supply; - Road Access; - Site Clearing; - Water Supply; • Capital infrastructure costs include a minimum 10% contingency. • The key operating cost estimates for processing have been derived from current St Barbara fixed and variable processing costs and studies completed by Mintrex on scaling up the processing plant to 2.1Mtpa and including a flotation circuit. • Haulage costs are derived from first principles to account for the 165km haulage distance. • Mining costs are sourced from quotations received from reputable mining contractors. • Costs not directly associated with mining contractor work were estimated by direct quotation or built from first principles. • No deleterious elements have been identified in ore testwork and

Criteria	JORC Code explanation	Commentary
		as such no allowance has been made. • A USD:AUD exchange rate of 0.75 has been derived from corporate guidance and independent advice from reputable financial institutions that take into account historical exchange rates and current market trends. • Bardoc have entered into a binding offtake agreement with concentrate trading partner MRI. Costs for treatment, penalties, refining and payments are based on the binding offtake agreement in place. • All other transportation, handling, insurances etc. have been derived from an assessment completed by logistics company Qube assuming the transportation of concentrate via lined 20' GP containers through the port of Fremantle. • Aphrodite incurs a 2.5% state royalty and a 2.5% Franco Nevada Royalty.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Production and recovery for revenue calculations are based on detailed mine schedules, mining factors and cost estimates established as part of the Feasibility study. • Commodity prices and forward looking exchange rates are provided by St Barbara's corporate finance department. • Bardoc have entered into a binding offtake agreement with concentrate trading partner MRI. Costs for treatment, penalties, refining and payments are based on the binding offtake agreement in place. • All other transportation, handling, insurances etc. have been derived from an assessment completed by logistics company Qube assuming the transportation of concentrate via lined 20' GP containers through the port of Fremantle. • Gold price and exchange rates have been determined by St Barbara's corporate finance team. A gold price of A$2,000/oz (US$1,500/oz) has been used for the ore reserve estimation. • The Competent Person considers this to be an appropriate commodity price assumption based on the current level of study and price environment at the time of the completion of the Ore Reserve work.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Gold ore from the mine is to be sold to the Perth mint. • Concentrate from the mine is to be sold to Bardoc's concentrate offtake partner, MRI., entered into after a formal tender and assessment phase of several high quality concentrate traders. • Price is formulated from the concentrate sale terms.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• The Ore Reserve estimate is based on a Definitive-Feasibility level of accuracy with inputs from underground mines, processing, transportation, sustaining capital and contingencies scheduled and costed to generate the initial Ore Reserve cost model. • The Ore Reserve returns a positive NPV based on the assumed commodity price and the Competent Person is satisfied that the project economics that make up the initial Ore Reserve retains a suitable profit margin against reasonable future commodity price movements. • Sensitivity analysis has indicated that the project drivers are exchange rate, gold price, metallurgical recovery followed by operating expenditure. NPV at A$2,000/oz is sensitive to reasonable unfavourable changes to these drivers.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• St Barbara are in liaison with the government and key stakeholders and it is not expected to incur any impediments for the project to proceed.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• No material naturally occurring risks have been identified for the project • A compensation Agreement is in place with the leaseholder of the Mt Vetters pastoral station and the Bardoc Homestead. These have been included in the cost but are not material to the plan. • Aphrodite has two Native Title claimants currently across its tenure. Bardoc has entered into ongoing consultation with both parties. An all-areas agreement is in place with Maduwongga and partial access agreements are in place with Marlinyu Ghoorlie. Both agreements provide for required access to tenure required for the project. • Bardoc has entered into a binding offtake agreement with MRI for the sale of the concentrate. • There are no government agreements or approvals identified that are likely to materially impact the project.

Criteria	JORC Code explanation	Commentary
		• It is expected that future agreements and Government approvals will be granted in the necessary timeframes for the successful implementation of the project. • There are no known matters pertaining to any third parties to affect the development of the project.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• The classification of the Ore Reserve has been carried out in accordance with the JORC Code 2012. • The Ore Reserve results reflect the Competent Persons view of the deposit. • The Probable Ore Reserve is based on that portion of Indicated Mineral Resource within the mine designs that may be economically extracted and includes allowance for dilution and ore loss. • There are no Proved Ore Reserves. • The result appropriately reflects the Competent Person's view of the deposit. • No Measured Mineral resources form the basis of the Ore Reserves
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• The Ore reserve estimates have been reviewed by St Barbara's corporate technical department. No further external audits have been completed.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The mine designs, schedule and financial model for the Ore Reserve have been completed to a Definitive-Feasibility standard with a better than +/- 10-15% level of confidence. • A degree of uncertainty is associated with geological estimates and the Ore Reserve classification reflects the level of confidence in the Mineral Resource. • There is a degree of uncertainty regarding estimates of modifying mining factors, geotechnical and processing parameters that are of a confidence level reflected in the level of the study. • The Competent Person(s) area satisfied that a suitable margin exists that the Ore Reserve estimate would remain economically viable with any negative impacts applied to these factors or parameters. • There is a degree of uncertainty in the commodity price used however the Competent person(s) are satisfied that the assumptions used to determine the economic viability of the Ore Reserve are based on reasonable current data.

JORC Table 1 Checklist of Assessment and Reporting Criteria – ZOROASTRIAN
Section 1 Sampling Techniques and Data – Zoroastrian

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The mineralisation was primarily sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on nominal 40m x 20m (N x E) grid spacing. The holes were generally drilled towards grid east at varying angles to optimally intersect the mineralised zones. • The drilling database consists of historic (pre 2009) and EXG drilling data. The historic data consists of 19 DD and 420 RC holes; EXG drilling consists of 12 DD, 22 Reverse Circulation with diamond tail (RCD), 579 RC and 1800 Reverse Circulation grade control (RCGC) holes. • Complete details are un-available for historic drilling. • Generally, BDC RC recovered chip samples were collected and passed through a cone splitter. • Limited numbers of field duplicates and screen fire assays have been undertaken to support sample representivity. • EXG DD core has been sampled by submission of cut half core. • All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g or 50g charge. Approximately 200g of pulp material is returned to EXG for storage and potential assay at a later date. The BDC DC samples are collected at nominated intervals by EXG staff from core that has been cut in half and transported to a Kalgoorlie based laboratory. Samples were oven

Criteria	JORC Code explanation	Commentary
		dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g of 50g charge. Approximately 200g of pulp material is returned to EXG for storage and potential assay at a later date. • Due to the presence of coarse gold and arsenopyrite some 150 samples were subjected to a 400g LeachWell® technique with a standard fire assay on the tail. This demonstrated that some of the gold is nuggetty in nature and that normal fire assay techniques may underestimate the grade. It also demonstrated that the mineralisation is non-refractory in nature.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Prior to 2009 19 DC and 420 RC holes were drilled by previous owners over the area. These holes are without documentation of the rig type and capability, core size, sample selection and handling. • For (post 2009) EXG and BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter). • All EXG and BDC drill core is orientated by the drilling contractor with a down the hole Ace system. Core diameter is noted in the assay results table for DC assay results.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• All EXG and BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilised for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database. • The EXG and BDC DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained. • EXG RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample. • The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings. • Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All EXG and BDC RC samples are geologically logged directly into hand-held Geobank devices. • All EXG and BDC DC is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralisation, shearing/foliation and any other features that are present • All EXG and BDC DC is photographed both wet and dry after logging but before cutting. • The entire lengths of EXG RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length and any core loss or voids intersected are recorded.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• BDC Exploration results reported for drill core are half core taken from the right-hand side of the core looking down hole. Core is cut with an on-site diamond core saw. • All EXG and BDC RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database.

Criteria	JORC Code explanation	Commentary
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The EXG and BDC RC samples are sorted, oven dried, the entire sample is pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge. • The EXG and BDC DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 40g fire assay charge. • EXG and BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. EXG inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser. • In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. • For DC, no core duplicates (i.e. half core) have been collected or submitted. • The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralisation located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• EXG and BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been SGS Australia and Bureau Veritas Australia which has two facilities in Kalgoorlie. No complete details of the sample preparation, analysis or security are available for either the historic AC, DD or RC drilling results in the database. • The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for gold analysis at this project given its mineralisation style. The technique involves using a 40g or 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine. • The QC procedures are industry best practice. The laboratory is accredited and uses its own certified reference material. The laboratory has 2 duplicates, 2 replicates, 1 standard and 1 blank per 50 fire assays. • EXG and BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures EXG examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Consultant geologist, Rick Adams from Cube Consulting, John Harris of Geological Services and independent geologist Matt Ridgway, have inspected drill core and RC chips in the field to verify the correlation of mineralised zones between assay results and lithology/alteration/mineralisation. Recent drilling has been inspected by BDC site geologists. • A number of diamond core holes were drilled throughout the deposit to twin RC holes. These twinned holes returned results comparable to the original holes and were also used to collect geological information and material for metallurgical assessment. A number of RC holes have also been drilled that confirmed results obtained from historical drill holes. • Primary data is sent digitally every 2-3 days from the field to BDC's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database

Criteria	JORC Code explanation	Commentary
		software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• All drill holes have their collar location recorded from a handheld GPS unit. Subsequent to drilling holes were picked up using RTKGPS by the mine surveyor or by contracted surveyors. Downhole surveys are completed every 30m downhole. No detailed down hole surveying information is available for the historic RC or DD drilling. • EXG routinely contracted down hole surveys during the programmes of exploration RC drilling. Surveys were completed using a digital electronic multi-shot tool. Diamond drilling was downhole surveyed by rig operators using a north seeking gyro. All survey tools were maintained by Contractors to manufacturer specifications. • All drill holes and resource estimation use the MGA94, Zone 51 grid system. • The topographic data used was obtained from consultant surveyors and is based on a LiDAR survey flown in 2012. It is adequate for the reporting of Exploration Results and subsequent Mineral Resource estimates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The nominal exploration drill spacing is 40m x 40m with many E-W cross-sections in-filled to 20m across strike. This has been infilled with variable spacing for Resource estimate purposes to 20 x 20m and with Grade control to 7.5 x 5m (N x E) spacing. • The drill spacing, spatial distribution and quality of assay results is sufficient to support the JORC classification of material reported previously and is appropriate for the nature and style of mineralisation being reported. • The majority of RC holes were sampled at 1m, but when this isn't the case, sample compositing to 4m has been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of drilling is to grid east. The bulk of the mineralised zones are perpendicular to the drilling direction. Structural logging of orientated drill core supports the drilling direction and sampling method. • 2019 DC drilling was oriented towards the SSE or NNW, (sub) parallel to a unit of fractionated (prospective) dolerite. As such core has intersected mineralised structures at oblique angles • No drilling orientation and sampling bias has been recognised at this time.
Sample security	• *The measures taken to ensure sample security.*	• RC samples are delivered directly from the field to the Kalgoorlie laboratory by BDC personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an EXG generated sample submission list and reports back any discrepancies • Drill core is transported daily directly from the drill site to BDC's secure core processing facility by BDC personnel with no detours. The core is then placed on racks and processed until it requires cutting. Core was initially transported directly by EXG's staff to the Kalgoorlie laboratory where it is cut in half by laboratory staff and then sampled by EXG staff. BDC obtained a core saw and subsequently cut core at the core processing facility. The core is then prepared for assay in Kalgoorlie
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An internal review of sampling techniques and procedures was completed in March 2013. No external or third-party audits or reviews have been completed.

Section 2 Reporting of Exploration Results – Zoroastrian

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The results reported in this Announcement are on granted Mining tenements held by GPM Resources Pty Ltd, a wholly owned subsidiary of Bardoc Gold Limited.

Tenement	Holder	Area (Ha)	Expiry Date
M24/11	GPM Resources	1.80	23/03/2025
M24/43	GPM Resources	9.28	15/10/2026

Criteria	JORC Code explanation	Commentary
		<table><tr><td>M24/99</td><td>GPM Resources</td><td>190.75</td><td>02/12/2028</td></tr><tr><td>M24/121</td><td>GPM Resources</td><td>36.95</td><td>02/11/2029</td></tr><tr><td>M24/135</td><td>GPM Resources</td><td>17.75</td><td>10/06/2029</td></tr><tr><td>M24/869</td><td>GPM Resources</td><td>7.16</td><td>21/10/2024</td></tr><tr><td>M24/870</td><td>GPM Resources</td><td>7.04</td><td>21/10/2024</td></tr><tr><td>M24/871</td><td>GPM Resources</td><td>9.72</td><td>21/10/2024</td></tr><tr><td>M24/951</td><td>GPM Resources</td><td>190.03</td><td>16/04/2036</td></tr></table> • At this time, the tenements are in good standing. There are no existing royalties, duties or other fees impacting on the EXG Kalgoorlie North Project.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and was used as a guide to EXG's and BDC's exploration activities. This includes work by AMAX, Hill Minerals, Aberfoyle and Halycon Group. Previous parties have completed both open pit and underground mining, geophysical data collection and interpretation, soil sampling and drilling.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The deposit occurs on the eastern limb of a narrow NNW trending structure, the Bardoc-Broad Arrow syncline within the Bardoc Tectonic Zone. In this zone the sequence comprises highly deformed fault slice lenses of intercalated Archaean mafic and ultramafic volcanics and metasediments. • The mineralisation in the Zoroastrian area is predominately associated with a complex array of multiple dimensional and variable orientated quartz veins and stock works within the differentiated Zoroastrian Dolerite. In places a surficial 1-2m thick calcrete/lateritic gold bearing horizon and small near surface supergene pods exist. • The Zoroastrian dolerite is thought to be the stratigraphic equivalent of the Paddington dolerite which hosted the 1m+oz mine at Paddington itself with both deposits bounded to the west by the Black Flag sediments and to the east by the Mount Corlac ultramafics. Shear zones up to 10m wide containing gold bearing laminated quartz veining (5cm to 1m wide) occur on both contacts. • In late 2018 a fractionated unit within the dolerite sequence was defined using multielement pXRF data and machine learning. This dolerite strikes NNW and dips steeply to the NE. This unit is a preferred host for gold mineralisation where intersected by mineralised structures. • At Zoroastrian slivers of the intruded sequence occur apparently internal to the dolerite throughout the area suggesting a more complex thrust/folding structural system than is readily apparent. Geological and structural interpretation at Zoroastrian is further complicated by contradicting and conflicting mapping and logging of the different units particularly between basalt and dolerite

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are presented

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*	• No exploration results are presented

Criteria	JORC Code explanation	Commentary
	• *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources – Zoroastrian – Open Pit (OP)

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the EXG Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited site
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is complex, however a greater understanding of the geology has been gained from the mining of Central open pit. The continuity of mineralisation and volume controls are well established where drilling is at a nominal 30 x 30 m hole spacing. • The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole survey data. As such throughout the deposit the company has twinned historical holes to confirm results and location. • The close spaced RC grade control drilling and mining pit floor exposure has allowed a detailed re-evaluation of the geological controls on mineralisation by EXG. In addition, subsequent re-logging of diamond core and RC chips has enabled the identification and distinction between mineralised steep and flat structures. The new interpretation of these controls materially impacts the estimation of the Mineral Resources and has triggered the need for the re-estimation. • The result of this revision is that the majority of the mineralisation outside of Central open pit is associated with the steep shear hosted (60-degree west dipping) structures as opposed to the flatter (35-45-degree west dipping) ladder veins. The bulk of mineralisation near surface in Central open pit was associated with the flat structures. However as the pit deepened, almost all the mineralisation was associated with the steep west dipping structure. • The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a ~0.3g/t (open pit) Au cut off which represents the mineralised shear in all modelled domains
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation extends 1300m north/south, 250m east/west and 300m in elevation. Mineralised structures are present at surface for some lodes. There is a depletion zone that extends to about 30m

Criteria	JORC Code explanation	Commentary
		below surface. Lodes are also present on historic pit floor and walls in previous mining activities.

Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*
	• *The assumptions made regarding recovery of by-products.*
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).*
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
	• *Any assumptions behind modelling of selective mining units.*
	• *Any assumptions about correlation between variables.*
	• *Description of how the geological interpretation was used to control the resource estimates.*
	• *Discussion of basis for using or not using grade cutting or capping.*
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*
		• EXG has used 3DM wireframes to constrain the mineralised shear zones, with the most significant shear interpretation within Central open pit being completed by EXG site geologists and based on pit floor mapping, and observation, ore mark-outs and the close spaced RCGC drilling at spacing's of 7.5m N x 5m E-W. All other lodes have been interpreted on a sectional basis using the available exploration and RCGC drilling data on variable spacing ranging from 7.5 x 5m to 20 x 20m to 40 x 40m (N x E-W).
		• On the basis of sample size, open pit selectivity assumption (2 EW x 5 NS x 2.5mRL) and selected estimation methodology, a 1m down hole composite was selected for the open pit estimation. 1m compositing was also appropriate for the underground estimation given the sometimes narrow nature of the steep lodes.1m composite intervals falling within the wire framed estimation domains were coded in the database.
		• It was evident that some of the estimation domains contained extreme outlier gold values. The highly positively skewed gold distributions mean that conventional linear estimation methods, such as Ordinary Kriging ("OK") are likely to produce over-smoothed block grade estimates. For this reason, it was decided to undertake open pit grade estimation using the non-linear Localised Uniform Conditioning ("LUC") method.
		The following criteria were considered when choosing gold grade top cuts:
		  • The coherence and stability of the upper tail of the gold grade distribution;
		  • Visual inspection of the spatial location of outlier values;
		• The statistics show that in some cases there is a large reduction in mean grade and variability following top cutting. This is due to the elimination of the disproportionate effect of extreme outlier gold grade values. It should be noted that the difficulties posed by these extreme outliers significantly increases the inherent risk in the gold grade estimates.
		The LUC estimates were implemented using the MinestisTM software package before being transferred into a Micromine™ block model
		• No consideration has been made to by-products.
		• One check estimate has been undertaken by EXG as a validation step for the open pit model. This is a comparison of an OK grade control model, based only on the tight 5mE x 7.5mN grade control drilling, to an LUC model undertaken using only the resource drill data. Results indicate that the LUC model based on exploration data reconciles to within 9% of contained metal at a 0.6g/t Au cut-off. Both resource models were validated by comparison of composite grades to estimated grades on a domain basis, swath plots and visual checks
		• The LUC estimation panel size used was 8mE x 15mE x 10mRL. An SMU block size of 2mE x 5mN x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size corresponds exactly to the current block size for grade control modelling, conforms to the mining flitch height and is elongated in the same direction (north-south axis) as the trend of the lodes at Zoroastrian Central. While the data spacing in areas other than the grade control drilled volume would be considered too wide for such a small block size if conventional linear estimation methods were used, EXG has used the LUC method, which is intended specifically for estimating the grade distribution of smaller blocks. Whilst the ore is associated with arsenopyrite, assay data and metallurgical test work indicate this does not affect recoveries. No other deleterious elements have been identified.

Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were based on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The open pit Mineral Resource has been reported above a 0.4g/t Au cut-off above 240mRL (200m depth).
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• This MRE has been undertaken on the assumption of open pit mining methods, the selection of SMU size was based on the scale of mining equipment used in previous mining at Zoroastrian.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• The Zoroastrian deposit has been mined successfully with no metallurgical issues. Gold recoveries in excess of 90% were achieved during mining of Central open pit during 2015-2016.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• There are no environmental issues concerning the extraction or disposal of waste or tailing material.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• There are three sources of experimental bulk density data. The first are the results of systematically collected DD core measurements and the second were downhole caliper SG readings every 0.1m for selected holes. The third source was bulk in-pit density determinations gathered by the mining staff. The DD core results provide a source of competent rock bulk density data however the data lacks any representative data for less competent oxide and transitional weathered rock. The in-pit data represents an attempt to measure the densities of the less competent material. • A total of 103 determinations have been made from 13 EXG DD holes. Determinations were made using two methods – for 5 holes the densities were determined using a down hole probe, the Auslog A659 Caliper Tool, the balance were selected core sent to the Genalysis Laboratory in Kalgoorlie where specific gravity was determined by gravimetric technique. The majority of these data were taken on fresh dolerite core, with a small number of oxidised and transitional dolerite core results. The average depth of these determinations is 104m downhole. • A total of 190 in-pit determinations have been made between the 430m, and 400m pit floor RLs, at surveyed locations within 29 high and low grade ore mark-out blocks. The RLs of these determinations places them within the oxide and transitional weathering profile. • On balance BDC believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density. BDC have used assumed bulk density values for ore and waste based on the interpreted weathering surfaces.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The geological model and continuity of the mineralisation is currently well understood due to the RCGC drilling, mining exposure of the mineralised lodes on the pit floor and distinction between steep and flat structures gained primarily from a re-log of RC chips. • The MRE is classified into measured, indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. • The MRE has been validated by "ground truth" methods whereby estimates using only resource exploration drilling on a 20x20m collar spacing has been compared to a volume estimated by close spaced RCGC drilling. The results of this comparison confirm that the deeper MR areas estimated outside the grade control volumes can be expected to be representative of what will be defined for mining by the RCGC data to within 10% contained metal. • The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 22 May 2018 ASX:EXG 'KNGP Mineral Resource Update' Cut-off grades were revised in November 2018 The competent person has reviewed this work
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	• The relative accuracy of the Mineral Resource Estimates is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • The significant amount of production (>700kt) and geological information available from historical mining production data allows for a high degree of confidence in geological, mining and milling parameters. Grade and geological continuity can be estimated to a degree of accuracy high enough to allow for a proportion of the

Criteria	JORC Code explanation	Commentary
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	resource to be classified as Measured, Indicated or Inferred where appropriate. • The LUC block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size. • Reconciliation between EXG mining production and the depleted resource within the August 1 2017 Central final pit demonstrates a close (less than +-10%) correlation in contained ounces.

Section 3 Estimation and Reporting of Mineral Resources – Zoroastrian – Underground (UG)

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited site
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is complex, however a greater understanding of the geology has been gained from the mining of Central open pit. The continuity of mineralisation and volume controls are well established where drilling is at a nominal 30 x 30 m hole spacing. • The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole survey data. As such throughout the deposit the company has twinned historical holes to confirm results and location. • The close spaced RC grade control drilling and mining pit floor exposure has allowed a detailed re-evaluation of the geological controls on mineralisation by BDC. In addition, subsequent re-logging of diamond core and RC chips has enabled the identification and distinction between mineralised steep and flat structures. The new interpretation of these controls materially impacts the estimation of the Mineral Resources. • The result of this revision is that the majority of the mineralisation outside of Central open pit is associated with the steep shear hosted (60-degree west dipping) structures as opposed to the flatter (35-45-degree west dipping) ladder veins. The bulk of mineralisation near surface in Central open pit was associated with the flat structures. However as the pit deepened, almost all the mineralisation was associated with the steep west dipping structure. • The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a 0.7g/t cut-off for the underground model. The 0.7g/t threshold was chosen based on an observation from recent diamond drilling that there is frequently a very sharp grade contact on the hanging wall of the steep lodes. Gold values transition from background to ore grades over a very short distance. The hanging wall contact is the one likely to be followed in ore drives. The footwall contact was also interpreted to a 0.7g/t cut-off, although grades can be more diffuse, transitioning to background values over a longer distance.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation extends 1300m north/south, 250m east/west and 300m in elevation. Mineralised structures are present at surface for some lodes. There is a depletion zone that extends to about 30m below surface. Lodes are also present on historic pit floor and walls in previous mining activities.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	• BDC has used 3DM wireframes to constrain the mineralised shear zones, with the most significant shear interpretation within Central open pit being completed by BDC site geologists and based on pit floor mapping, and observation, ore mark-outs and the close spaced RCGC drilling at spacing's of 7.5m N x 5m E-W. All other lodes have been interpreted on a sectional basis using the available exploration and RCGC drilling data on variable spacing ranging from 7.5 x 5m to 20 x 20m to 40 x 40m (N x E-W). • 1m compositing was considered appropriate for the underground

Criteria	JORC Code explanation	Commentary
	• *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	estimation given the sometimes narrow nature of the steep lodes. 1m composite intervals falling within the wire framed estimation domains were coded in the database. • The underground resource model was estimated by Ordinary Kriging (OK) using Micromine software. The following criteria were considered when choosing gold grade top cuts: • The coherence and stability of the upper tail of the gold grade distribution; • Visual inspection of the spatial location of outlier values; • The statistics show that in some cases there is a large reduction in mean grade and variability following top cutting. This is due to the elimination of the disproportionate effect of extreme outlier gold grade values. • It should be noted that the difficulties posed by these extreme outliers significantly increases the inherent risk in the gold grade estimates. • No consideration has been made to by-products. • The resource model was validated by comparison of composite grades to estimated grades on a domain basis, swath plots and visual checks • The underground model used a block size of 4mE x 15mN x 8mRL, considered appropriate for the drill hole spacing and probable mining method Whilst the ore is associated with arsenopyrite, assay data and metallurgical test work indicate this does not affect recoveries. No other deleterious elements have been identified.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were based on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The underground Mineral Resource has been reported above a 1.2g/t Au cut-off below 240mRL, which is 200m below surface.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• A cut-off of 1.2g/t was chosen for material below 240mRL to highlight the potential for underground extraction. Further work, including additional drilling, will determine the optimal mining method for this material
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• The Zoroastrian deposit has been mined successfully with no metallurgical issues. Gold recoveries in excess of 90% were achieved during mining of Central open pit.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• There are no environmental issues concerning the extraction or disposal of waste or tailing material. • Historical base line environmental assessments have been completed with no known impacts on the mining and processing operation for Zoroastrian. • Characterisation of representative waste rock samples from Zoroastrian indicated most waste components have low sulphide levels and are classified Non-Acid Forming (NAF). • Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailings dams, and their impact to native vegetation, faunal habitat; groundwater dependent ecosystems; and surface hydrology
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• There are three sources of experimental bulk density data. The first are the results of systematically collected DD core measurements and the second were downhole caliper SG readings every 0.1m for selected holes. The third source was bulk in-pit density determinations gathered by the mining staff. The DD core results provide a source of competent rock bulk density data however the data lacks any representative data for less competent oxide and transitional weathered rock. The in-pit data represents an attempt to measure the densities of the less competent material. • A total of 103 determinations have been made from 13 EXD DD holes. Determinations were made using two methods – for 5 holes the densities were determined using a down hole probe, the Auslog A659 Caliper Tool, the balance were selected core sent to the Genalysis Laboratory in Kalgoorlie where specific gravity was determined by gravimetric technique. The majority of these data were taken on fresh dolerite core, with a small number of oxidised

Criteria	JORC Code explanation	Commentary
		and transitional dolerite core results. The average depth of these determinations is 104m downhole. • A total of 190 in-pit determinations have been made between the 430m, and 400m pit floor RLs, at surveyed locations within 29 high and low grade ore mark-out blocks. The RLs of these determinations places them within the oxide and transitional weathering profile. • Density measurements (Archimedes method) were made from recent 2019 DD drilling in fresh rock. In total 60 ore and 54 waste measurements were used. This resulted in an average waste density of 2.89kg/m3 and ore density of 2.97kg/m3. A fresh ore density of 2.9 was adopted in the resource model. Oxide and Transitional ore densities used were 2.0 kg/m3 and 2.5 kg/m3 respectively • On balance BDC believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density. BDC have used assumed bulk density values for ore and waste based on the interpreted weathering surfaces.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The geological model and continuity of the mineralisation is currently well understood due to the RCGC drilling, mining exposure of the mineralised lodes on the pit floor and distinction between steep and flat structures gained primarily from a re-log of RC chips. • The MRE is classified into measured, indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. • The MRE has been validated by "ground truth" methods whereby estimates using only resource exploration drilling on a 20x20m collar spacing has been compared to a volume estimated by close spaced RCGC drilling. The results of this comparison confirm that the deeper MR areas estimated outside the grade control volumes can be expected to be representative of what will be defined for mining by the RCGC data to within ~10% contained metal. • The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 30 September 2020 ASX:BDC 'Updated Mineral Resource for Bardoc Gold Project Increases confidence in the 1Moz Production Target'' The competent person has reviewed this work
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource Estimates is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • The significant amount of production (>700kt) and geological information available from historical mining production data allows for a high degree of confidence in geological, mining and milling parameters. Grade and geological continuity can be estimated to a degree of accuracy high enough to allow for a proportion of the resource to be classified as Indicated or Inferred where appropriate. • The Kriged MRE statement relates to global estimates of tonnages and grade. Reconciliation between EXG mining production and the depleted resource within the August 1 2017 Central final pit demonstrates a close (less than +-10%) correlation in contained ounces.

Section 4 Estimation and Reporting of Ore Reserves – Zoroastrian Underground

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• Bardoc Gold Mineral Resource as reported in March 2021 • The Mineral Resources are reported inclusive of the Ore Reserve
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has conducted multiple site visits and is familiar with the region and is comfortable relying on site visit reports from other independent consultants and site surveys in determining the viability of the Ore Reserve.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a*	• A Definitive Feasibility Study carried out by Bardoc and historical and forecast production costs for Leonora provided the basis for costs, modifying factors and parameters resulting in an Ore Reserve mine plan that is technically achievable and economically viable.

Criteria	JORC Code explanation	Commentary
	mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Definitive Feasibility costs, revenue factors and physicals form the basis for Cut Off Grade calculations. • Mill recovery is calculated based on metallurgical testwork carried out as part of the Definitive Feasibility Study. • A gold price of A$2,000/oz (US$1,500/oz) was assumed for the Cut Off Grade calculations. • The underground COG of 2.0 g/t was used as the basis for initial stope design, with all designs assessed by detailed financial analysis to confirm their profitability in consideration to the works required to access and extract them.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• Mineral Resource material was converted to Ore Reserves after completing an optimisation process, detailed mine design, schedule and associated financial assessment. • The underground ore reserve is planned to be mined using conventional underground mining methods. The mining will consist of Longhole open Stoping (LHOS) on 20m level spacing with voids remaining open and insitu rock rib and sill pillars used for stability. Mining operations will be undertaken by an experienced and reputable mining contractor using a conventional fleet of twin boom jumbo's, 76mm production drills, 10-15t loaders and 60 tonne trucks. • The mining methods chosen are well-known and widely used in the local mining industry and production rates and costing can be predicted with a suitable degree of accuracy. Suitable access exists to the mine. • Underground designs are based on geotechnical parameters provided by independent consultants Peter O'Bryan and Associates. • Stoping was designed within the recommended HR parameters of 7.5. • Stope parameters used in the underground reserves are 20m level spacing (height), maximum 25m strike length, staggered rib pillars (minimum 1:1 width to length ratio) with sill pillars less than or equal to 80m spacing. • Underground grade control will be carried out using diamond drill holes from stockpiles off the decline. The costs have been based off estimated drilling requirements and current diamond drill rates incurred by the company. • Mineral Resources used for optimisation were those detailed previously. Cut-off grades and geotechnical inputs used for optimisations were also applied as detailed previously. • A 10% waste (i.e. zero grade) dilution factor was applied to underground stoping and mine development. • Insitu stope recovery as assumed at 95%; Stope recovery where rib pillars are required was 0%; Stope recovery, on levels where sill pillars are left was 0%. It is assumed all development is fully recovered. • A minimum mining width of 2.5m was applied to underground stopes. • Inferred Resources were not taken into account during valuation in the underground design process, and as such did not have an impact on stope shape or development design. Any Inferred material contained within underground designs was treated as waste (i.e. zero grade). • Although Zoroastrian is a brownfields site and will require all surface and underground infrastructure to be installed, including offices, workshops, first aid facilities, power supply, water management, stores, communications, fuel farm, magazines, waste dumps, run-of-mine (ROM) pads and access road upgrades. This has been allowed for in the Definitive Feasibility Study.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.*	• A primary crusher, SAG and ball mill circuit with a pebble crusher will produce a final grind size distribution P80 of 75 microns to be fed to a Carbon-In-Leach (CIL) circuit based on free milling nature of orebody based on metallurgical testwork. • Ore will be processed through the existing Gwalia processing facility located 182km North of Zoroastrian. This is a standard CIL circuit suitable for treatment of the Zoroastrian Ore • All underground Material is Fresh. • CIL is a standard and common gold extraction process for free milling ore. • Metallurgical recovery has been determined from the Definitive Feasibility Study test work and laboratory test work conducted

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>• For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</td><td>during toll treatment of the Zoroastrian oxide and transitional ore. The models determine the tailings grade and then use the head grade to calculate recovery. Two models were developed; a combined oxide and transitional model and a primary ore model. The oxide and transitional model was developed from 5 samples across the deposit tested during the DFS and 14 samples consisting of one sample from each batch processed in a toll treatment campaign in 2016 (CEN001 to 011, 014, 015 & 018). The primary model was developed from 9 composites tested during the DFS. The models are shown in the table below, where [Au] is the gold head grade in g/t. When used in the model a recovery upper limit of 97% was used.
• As the recovery models for the primary ore has a negative regression, i.e. as the grade goes down the recovery goes up, and the variance in both the testwork and the models is limited varying from 94.39% to 95.93% for stope ore with an average of 94.78% and 94.43% to 98.00% for development ore with an average of 95.07%, it was determined a fixed recovery model of the average of the testwork samples would be used for the purpose of Reserves calculations, 94.4%. 94.4% is less than the model data and is considered an appropriate reflection to not overstate the value of lower grade material.
<table>
<tr><th>Ore Source</th><th>Model</th><th>Recovery Limit</th></tr>
<tr><td>Zoroastrian Oxide</td><td>([Au] – (0.0245[Au] + 0.01))/[Au]</td><td>97</td></tr>
<tr><td>Zoroastrian Transition</td><td>([Au] – (0.0245[Au] + 0.01))/[Au]</td><td>97</td></tr>
<tr><td>Zoroastrian Primary</td><td>([Au] – (0.058[Au] - 0.019))/[Au]</td><td>97</td></tr>
<tr><td>Zoroastrian Underground Primary</td><td>([Au] – (0.058[Au] - 0.019))/[Au]</td><td>97</td></tr>
</table>
• No deleterious elements were identified from the mineralogical/metallurgical assessments that impact on process selection.
• Zoroastrian ore has historically been processed through toll treatment campaigns in the goldfields, bulk samples collected during this period produced an average recovery rate of 96.5% and median recovery of 97%.
• The ore reserve has been estimated based on appropriate mineralogy to meet specifications from the Definitive Feasibility level testwork.</td></tr>
<tr><td>Environmental</td><td>• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</td><td>• Base line environmental assessments have been completed with no known impacts on the mining and processing operation for Zoroastrian. A clearing permit and mining proposal is approved for the Zoroastrian underground and Zoroastrian North pit.
• Characterisation of representative waste rock samples from Zoroastrian indicated most waste components have low sulphide levels and are classified Non-Acid Forming (NAF).</td></tr>
<tr><td>Infrastructure</td><td>• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</td><td>• The Bardoc project is located 50km from the city of Kalgoorlie, adjacent the Goldfields highway, a sealed all-weather highway that is frequently travelled. This provides ready access to the site for transportation of infrastructure and consumables for the project.
• The infrastructure is designed to be located on tenement areas owned by Bardoc Gold.
• Labour will be sourced from the nearby town of Kalgoorlie, where available, or on a fly-in fly-out basis through the Kalgoorlie airport, housing the relevant people within the city of Kalgoorlie.
• Power will be provided by on site natural gas and diesel generators.
• Water will be sourced from the nearby Scotia Borefield and through pit dewatering of the nearby Botswana Locker and Jackorite pits.</td></tr>
<tr><td>Costs</td><td>• The derivation of, or assumptions made, regarding projected capital costs in the study.
• The methodology used to estimate operating costs.
• Allowances made for the content of deleterious elements.
• The source of exchange rates used in the study.
• Derivation of transportation charges.
• The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.
• The allowances made for royalties payable, both Government and private.</td><td>• Capital costs for the project have been generated in collaboration with the Bardoc study team and IME Consultants – Surface Mining infrastructure
• Capital costs are based on vendor supplied quotations and / or the consultancies cost database.
• Capital costs include:
  • Mining Infrastructure – Workshops, fuel bays, washdown bays, offices, magazines, dewatering infrastructure, power infrastructure;
  • Power Supply;
  • Road Access;
  • Site Clearing; and,</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		• Water Supply; • Capital infrastructure costs include a minimum 10% contingency. • The key operating cost estimates for processing have been derived from current St Barbara fixed and variable processing costs and studies completed by Mintrex on scaling up the processing plant to 2.1Mtpa. • Haulage costs are derived from first principles to account for the 182km haulage distance. • Mining costs are sourced from quotations received from reputable mining contractors. Costs not directly associated with mining contractor work were estimated by direct quotation or built from first principles. • No deleterious elements have been identified in ore testwork and as such no allowance has been made. • A USD:AUD exchange rate of 0.75 has been derived from SBM corporate guidance and independent advice from reputable financial institutions that take into account historical exchange rates and current market trends. • Transportation, treatment and refining costs have been estimated based on supply of Dore to the Perth mint. • Zoroastrian incurs a 2.5% state royalty. No private royalties are incurred on the Zoroastrian tenements.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Production and recovery for revenue calculations are based on detailed mine schedules, mining factors and cost estimates established as part of the Definitive feasibility study. • Gold price and exchange rates have been determined by an external financial expert group because of current market trends and by peer company comparison. A gold price of A$2,000/oz (US$1,500/oz) has been used for the ore reserve estimation. • The Competent Person considers this to be an appropriate commodity price assumption based on the current level of study and price environment at the time of the completion of the Ore Reserve work.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Gold ore from the mine is to be sold to the Perth mint. • There is a transparent quoted market for the sale of gold. • No industrial minerals have been considered.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• The Ore Reserve estimate is based on a Definitive Feasibility level of accuracy with inputs from mining, processing, transportation, sustaining capital and contingencies scheduled and costed to generate the update Ore Reserve cost model. • The Ore Reserve returns a positive NPV based on the assumed commodity price and the Competent Person is satisfied that the project economics that make up the Ore Reserve retains a suitable profit margin against reasonable future commodity price movements. • Sensitivity analysis has indicated that the project drivers are exchange rate, gold price, metallurgical recovery followed by operating expenditure. NPV at A$2,000/oz is sensitive to reasonable unfavourable changes to these drivers.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Bardoc are in liaison with the government and key stakeholders and it is not expected to incur any impediments for the project to proceed.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• No material naturally occurring risks have been identified for the project • Compensation deeds are in place for Mt Vettors pastoralist and the Bardoc Homestead. These have been included in the cost but are not material to the plan. No other material legal agreements and marketing arrangements are in place. There are no other legal or marketing agreements that are expected to be material to the ore reserves. • There are no government agreements or approvals identified that are likely to materially impact the project. • It is expected that future agreements and Government approvals will be granted in the necessary timeframes for the successful implementation of the project. • There are no known matters pertaining to any third parties to affect the development of the project.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• The classification of the Ore Reserve has been carried out in accordance with the JORC Code 2012. • The Ore Reserve results reflect the Competent Persons view of the deposit. • The Probable Ore Reserve is based on that portion of Indicated Mineral Resource within the mine designs that may be economically extracted and includes allowance for dilution and ore loss. • There are no Proved Ore Reserves. • The result appropriately reflects the Competent Person's view of the deposit. • No Measured Mineral resources form the basis of the Ore Reserves
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• The Ore reserve estimates have been reviewed by St Barbara limited. No further external audits have been completed.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The mine designs, schedule and financial model for the Ore Reserve have been completed to a Definitive Feasibility standard with a better than +/- 10-15% level of confidence. • A degree of uncertainty is associated with geological estimates and the Ore Reserve classification reflects the level of confidence in the Mineral Resource. • There is a degree of uncertainty regarding estimates of modifying mining factors, geotechnical and processing parameters that are of a confidence level reflected in the level of the study. • The Competent Person(s) area satisfied that a suitable margin exists that the Ore Reserve estimate would remain economically viable with any negative impacts applied to these factors or parameters. • There is a degree of uncertainty in the commodity price used however the Competent person(s) are satisfied that the assumptions used to determine the economic viability of the Ore Reserve are based on reasonable current data.

JORC Table 1 Checklist of Assessment and Reporting Criteria– EXCELSIOR
Section 1 Sampling Techniques and Data – Excelsior

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The drilling database consists of historic (pre 2009) and BDC drilling data. The historic data consists of drilling by: ○ Hill Minerals – 75 RC Holes ○ Aberfoyle - 157 RC Holes, 6 DD holes ○ Halcyon – 5 RC holes , 2 DD HolesHill Minerals – Wet and dry sampling utilised rotary cone splitter (of Hill minerals design). 4m composite and 1m RC samples assayed by Genalysis Laboratory Services using Aqua Regia. • Aberfoyle – When dry sampling, the entire 1.0 metre sample was collected in a large plastic bag sealed tight over the base of the cyclone to avoid dust loss. The full sample was then multiple riffled to provide two approximately 2kg splits, one for assay and the other for storage/metallurgical purposes. Initial samples assayed by Pilbara labs (Aqua Regia). Subsequent assaying by Classic Labs (50g Fire Assay) • Halcyon – Sample collection systems unknown. Samples assayed by ALS Lab using either 30g or 50g charge for RC and only 50g charge for DD samples. • Generally, BDC RC recovered chip samples were collected and passed through a cone splitter. • Limited numbers of field duplicates and screen fire assays have been undertaken to support simple representivity. • BDC DD core has been sampled by submission of cut half core. • All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 50g charge. Approximately 200g of pulp material is returned to BDC for storage and potential assay at a later date. The BDC DC samples are collected at nominated intervals by BDC staff from core that has been cut in half and transported to a

Criteria	JORC Code explanation	Commentary
		Kalgoorlie based laboratory. Samples were oven dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 50g charge. Approximately 200g of pulp material is returned to BDC for storage and potential assay at a later date.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Hill Minerals – Reverse Circulation blade, or roller with minor hammer. Drill diameter unknown. • Aberfoyle - Most of the Aberfoyle drilling was 4-3/4" reverse circulation roller drilling with minor R.C. hammer drilling in heavily quartz veined or fresher lithologies. Diamond drilling was NQ diameter and where the material drilled was intensely oxidised drilling was performed using a triple tube • Halcyon – Drilling techniques unknown • For (post 2009) BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter). • All BDC drill core is orientated by the drilling contractor with a down the hole Ace system. Core diameter is noted in the assay results table for DC assay results.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Hill Minerals – sample recovery unknown. • Aberfoyle - Dust loss in heavily oxidised material was minimal. In harder rock, minor dust loss occurred through the "smoke stack" of the cyclone. Very little wet sampling (through water injection), was done as it was preferable to keep the drill hole dry and continue with dry sampling where possible. This was achieved by periodically sealing the R.C. system and blowing the hole dry via the outside of the rods and then recommencing drilling/sampling through the inner tube when the hole had dried. Where water injection was necessary, samples were collected in a bucket after passing through a rotary disc wet splitter, flocculated, dried and split to give two 2kg samples. Core recovery was excellent in fresher rock and good in oxidised rock except where abundant quartz veining caused core loss due to competency contrast. • All BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilized for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database. • The BDC DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained. • BDC RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample. • The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings. • Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Hill Minerals – All holes geologically logged. • Aberfoyle – RC holes geologically logged, noting lithology, colour, weathering, alteration, veining and mineralisation (sulphides) • Halcyon – RC holes geologically logged, noting lithology, colour, weathering, alteration, veining and mineralisation (sulphides) • All BDC RC samples are geologically logged directly into hand-held Geobank devices. • All BDC DC is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralization, shearing/foliation and any other features that are present • All BDC DC is photographed both wet and dry after logging but

Criteria	JORC Code explanation	Commentary
		before cutting. • The entire lengths of BDC RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length and any core loss or voids intersected are recorded.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Hill Minerals – RC samples split using rotary cone splitter. • Aberfoyle - When dry sampling, the entire 1.0 metre sample was collected in a large plastic bag sealed tight over the base of the cyclone to avoid dust loss. The full sample was then multiple riffled to provide two approximately 2kg splits, one for assay and the other for storage/metallurgical purposes. Wet samples were collected in a bucket after passing through a rotary disc wet splitter, flocculated, dried and split to give two 2kg samples. Diamond core was sawn where hard enough, or cut with a knife when intensely oxidised. One half core submitted for assay. • Halcyon – Sub sampling techniques unknown • BDC Exploration results reported for drill core are half core taken from the right hand side of the core looking down hole. Core is cut with an on-site diamond core saw. • All BDC RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database. • The BDC RC samples are sorted, oven dried, the entire sample is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge. • The BDC DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge. • BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. BDC inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser. • In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Hill Minerals – Aqua Regia (partial) analysis by Genalysis Laboratory. Technique considered appropriate for the style of mineralisation. • Aberfoyle – initially Aqua Regia by Pilbara labs. A review of check assaying suggested doubts as to the reliability and integrity of Pilbara Labs, and it was decided to submit all future Excelsior samples to Classic Laboratories, Perth, for 50g charge gravimetric fire assay. Fire Assay considered a total technique. Conducted numerous checks to determine suitable levels of precision including inter laboratory checks. No data available to determine levels of assay accuracy. • Halcyon – Fire Assay (Total) by ALS Laboratory. QAQC procedures unknown. • BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been SGS Australia and Bureau Veritas Australia which has two facilities in Kalgoorlie. The fire assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 40 or 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine. • The QC procedures are industry best practice. The laboratory is accredited and uses its own certified reference material. The laboratory has 2 duplicates, 2 replicates, 1 standard and 1 blank per 50 fire assays.

Criteria	JORC Code explanation	Commentary
		• BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures BDC examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• BDC's Exploration Manager and Senior Project Geologist have inspected RC chips in the field and DC in the field and the core yard to verify the correlation of mineralized zones between assay results and lithology/alteration/mineralization. • A number of RC holes have also been drilled that confirmed results obtained from historical drillholes. No holes have been directly twinned, there are however holes within 10m of each other. • Primary data is sent digitally every 2-3 days from the field to BDC's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• Hill Minerals – All Collars located on Local Grid by unknown method. Local Grid to GDA95_51 transformation parameters known. Holes generally not downhole surveyed but considered low risk as most holes were < 60m in length. • Aberfoyle – All Collars located on Local Grid by unknown method. Local Grid to GDA95_51 transformation parameters known. Holes routinely downhole surveyed usually every 30m by unknown method. • Halcyon – Drill Collars surveyed by Datum Surveys using DGPS. AGD84_51 Grid system. Holes downhole gyro surveyed every 10m. • BDC - All drill holes have their collar location recorded from a handheld GPS unit. Subsequent to drilling holes were picked up using RTKGPS by contracted surveyors. Downhole surveys are completed every 30m downhole by drill rig personnel. • BDC routinely contracted down hole surveys during the programmes of exploration drilling for each RC and DC drill hole completed using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications. • All drill holes and resource estimation use the MGA94, Zone 51 grid system. • The topographic data used was obtained from consultant surveyors and is based on a LiDAR survey flown in 2012. It is adequate for the reporting of Exploration Results and subsequent Mineral Resource estimates. • The location of the old open pit and its dimensions are from post Aberfoyle mining completion data
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	• The nominal exploration drill spacing is 15m x 15m to a depth of ~60m. Deeper drilling is usually at a nominal 30m x 30m drill spacing. • This report is for the reporting of recent exploration drilling. The drill spacing, spatial distribution and quality of assay results is appropriate for the nature and style of mineralisation being reported. • The majority of RC holes were sampled at 1m, but when this isn't the case, sample compositing to 4m has been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of drilling is to MGA grid east which is coincident with magnetic east. The mineralized zones are North-South striking and sub-vertical so are perpendicular to the drilling direction. Drilling towards the east or west is equally effective. Structural logging of orientated drill core supports the drilling direction and sampling method. • No drilling orientation and sampling bias has been recognized at this time
Sample security	• *The measures taken to ensure sample security.*	• Hill Minerals – Sample security protocols unknown. • Aberfoyle – Sample security protocols unknown. • Halcyon – Sample security protocols unknown. • BDC - RC samples are delivered directly from the field to the Kalgoorlie laboratory by BDC personnel, the laboratory then checks the physically received samples against an BDC generated sample submission list and reports back any discrepancies. • Drill core is transported daily directly from the drill site to BDC's core

Criteria	JORC Code explanation	Commentary
		processing facility by BDC personnel with no detours. The core is then placed on racks and processed until it requires cutting. BDC use an onsite core saw to cut core at the core processing facility. The core is then sampled on site and transported directly to the laboratory in Kalgoorlie for assay.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An internal review of sampling techniques and procedures was completed in March 2018. No external or third party audits or reviews have been completed.

Section 2 Reporting of Exploration Results – Excelsior

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The results reported in this Announcement are on granted Mining tenements held by GPM Resources Pty Ltd, a wholly owned subsidiary of Excelsior Gold Limited. Tenement / Holder / Area (Ha) / Expiry Date M24/083 / GPM Resources / 110.65 / 02/04/2024 M24/854 / GPM Resources / 2.61 / 03/04/2022 M24/886 / GPM Resources / 8.25 / 22/04/2025 M24/888 / GPM Resources / 1.23 / 22/04/2025 M24/121 / GPM Resources / 36.95 / 22/04/2025 At this time, the tenements are in good standing. There are no 3rd party existing royalties, duties or other fees impacting on the Excelsior Deposit.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and is used as a guide to BDC's exploration activities. This includes work by Hill Minerals, Aberfoyle and Halycon Group. Previous parties have completed both open pit and underground mining, geophysical data collection and interpretation, soil sampling and drilling. • This report comments only on exploration results collected by Bardoc Gold.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The deposit occurs on the eastern limb of a narrow NNW trending structure, the Bardoc-Broad Arrow syncline within the Bardoc Tectonic Zone. In this zone the sequence comprises highly deformed fault slice lenses of intercalated Archaean mafic and ultramafic volcanics and metasediments. At the deposit scale, lithologies include ultramafics, basalts, schists, dolerites and porphyrys. • All lithologies have been affected by pervasive foliation development but major shearing occurs in three zones; the Western Contact Shear, the 10,000E Shear and along the eastern sediment contact, the Excelsior Shear. In these areas, shearing and/or attendant alteration have resulted in deep troughs in the base of oxidation, particularly associated within the 10,000E Shear, where intense oxidation occurs to depths greater than 100 metres and up to 30 metres wide. Shear related troughs in oxidation are all steeply dipping and parallel to lithological contacts and foliation in both strike and dip. • A 1-5 metre thick white quartz vein fills the interpreted position of the Excelsior Shear for a strike of a least 300 metres, and a prominent line of surface pitting traces the northern and southern extensions of the Excelsior Shear for several kilometres. Cross faulting has been observed at outcrop scale with minor probable displacement. Air photo interpretation by Aberfoyle suggested a strong ENE trending cross-fracture set that may have produced offsets in the stratigraphy. Correlation of lithology and mineralised zones along strike suggested that any movement along these structures is minimal

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are presented

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources – Excelsior

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Digital data from historic drilling is compared to hard copy reports to verify data integrity. • Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited site.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is complex, however there is good continuity of mineralisation established by 15m x 15m close spaced drilling near surface and 30m x 30m drilling at depth. The ore body is broad (up to 30m wide) and extends for 800m along strike. • The use of historical drilling provides a level of uncertainty as the company cannot validate the collar location and downhole survey data. Although holes were not deliberately twinned, ore grade intercepts in recent (EXG) drilling were intersected at similar depths and similar grades to nearby historic holes. • The lithology units have been modelled using drilling data and consist of a north-south striking, sub-vertical sequence of tuffaceous and pelitic sediments and minor intercalated volcanics and intrusives bounded by massive komatiitic flow rocks. Mineralisation is oriented N-S within 3 shear systems. The extensive shearing (foliation and alteration makes identification of protoliths and grade correlations difficult.

Criteria	JORC Code explanation	Commentary
		• Structural continuity of the shear systems is extensive. The grade continuity within the shears is less continuous and likely affected by changes in host lithology.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation extends 800m north/south, 100m east/west and 240m in elevation.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• BDC has used 3DM wireframes to constrain the mineralised shear zones. All lodes have been interpreted on a sectional basis using the available exploration drilling data on variable spacing. • Raw assay samples were composited to 1m. Compositing started where each drill hole entered a mineralised wireframe and continued until exiting the wireframe. A minimum composite width of 0.7m was chosen and any residual composites were averaged with the previous sample. • It was evident that some of the estimation domains contained extreme outlier gold values. The moderately positively skewed gold distributions mean that conventional linear estimation methods, such as Ordinary Kriging ("OK") are very likely to produce over-smoothed block grade estimates. For this reason, it was decided to undertake grade estimation using the non-linear Localised Uniform Conditioning ("LUC") method. • The following criteria were considered when choosing gold grade top cuts: • The coherence and stability of the upper tail of the gold grade distribution; • Visual inspection of the spatial location of outlier values; • The statistics show that in most cases there is only a small reduction in mean grade and variability following top cutting. • The LUC estimates were implemented using the Isatis.Neo software package before being transferred into a Datamine RM™ block model. Supervisor™ software used for geostatistics, variography and block model validation. • No consideration has been made to by-products. • The estimation panel size used was 8mE x 16mE x 10mRL. An SMU block size of 4mE x 8mN x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size is considered appropriate for the generally broad nature of mineralisation where a highly selective mining method (dictated by an even smaller SMU size) is considered unlikely. While the data spacing in areas other than near surface would be considered too wide for such a small block size if conventional linear estimation methods were used, EXG has used the LUC method, which is suited to estimating the grade distribution of smaller blocks using wide spaced data. • Interpolation parameters – the search ellipse was aligned to variogram search which in turn is aligned to the mineralised trend. A minimum of 7 samples with an optimal 4 samples for each of the four sectors was used, with a maximum of 4 samples per borehole. Two search passes were carried out, with the second increasing in volume by three-fold. • Classification was used to highlight confidence. • Validation was completed o visually, comparing block estimated grades to local drilling and; o Using swath plots on a N-S, E-W and depth and o Comparing estimated grades to composite grades on a domain by domain basis.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The open pit-able MRE has been reported above a 0.3g/t Au cut-off and above an RL which represents 250m below surface.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• This MRE has been undertaken on the assumption of open pit mining methods, the selection of SMU size was based on the scale of mining equipment likely to be used
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made*	• The Excelsior deposit has been mined successfully between 1985 and 1992 with no metallurgical issues. EXG has conducted metallurgical testwork on all ore types with recoveries in excess of 90% for all rock types.

Criteria	JORC Code explanation	Commentary
	when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• The currently mined open pit is filled with tailings which will be mined and encapsulated in the waste landform to minimise environmental disturbance. ○ Characterisation of representative waste rock samples from Excelsior indicated waste components have low sulphide levels, and are classified Non-Acid Forming (NAF). • Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailing dams, and their impact to native vegetation, faunal habitats; groundwater dependent ecosystems; and surface hydrology.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• A total of 188 SG determinations have been made from core and rock samples by both Aberfoyle and EXG (55 oxide, 35 transitional, 170 fresh). Aberfoyle used certified laboratories for SG determination. EXG used laboratory and in-house methods (weight in air and weight in water). • On balance BDC believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density. • BDC have used assumed bulk density values for ore and waste based on the interpreted weathering surfaces.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The geological model and continuity of the mineralisation is currently reasonably well understood The MRE is classified into indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. The classification is based on drill hole spacing, geological continuity and estimation quality parameters. • Indicated – Areas with drill spacing up to approximately 30mE x 30mN and with reasonable confidence in the geological interpretation. • Inferred – Areas with drill spacing in excess of 30mE x 30mN. • There is a high level of confidence in input data, geology and gold grades. At depth where drilling is more separated, confidence in geological and grade continuity is reduced and this is accounted for by having an inferred classification. • The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 29 March 2021 ASX:BDC ' Bardoc DFS Delivers 1Moz Ore Reserve to underpin new long-life, high-margin WA Gold Project' The competent person has reviewed this work
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • A number of measures were incorporated in the MRE to provide confidence in the estimate: ○ A conservative domain interpretation that limits volume and therefore tonnages in areas of sparse drilling ○ The estimate has used top-cuts to restrict the influence of high grade samples without having a detrimental effect on metal content. ○ Restricted search parameters ○ Adoption of the LUC estimation method provides an estimate of tonnages and grades at the SMU scale which can be achieved during mining • The block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size. • Although previously mined, there are no coherent production records available with which to compare this estimate to.

JORC Table 1 Checklist of Assessment and Reporting Criteria – BULLETIN SOUTH

Section 1 Sampling Techniques and Data – Bulletin South

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The Bulletin South open pit was mined up to April 1994. The drill hole database consists of historic (pre-2003) and EXG drilling data. The historical data is concentrated mostly within the part that has been mined, whilst the EXG drill holes extend below the pit. • Historical holes consist of 562 grade control RB (possibly some form of RC), 70 RC holes and 9 grade control RC holes (RCGC). The grade control holes were drilled at an average spacing of 3m x 5m (N x E) and in general 1m samples were collected. • Complete details are un-available for historic drilling. • EXG holes, 2 diamond drill holes and 34 RC holes were drilled at variable azimuths at dips of -60o to -50o to optimally test for potential mineralized zones, at a nominal spacing of 40m x 20m (N x E). There are in total 677 drill holes used in the resource estimate. • All RC recovered samples were collected and passed through a cone splitter. Prior to drilling, the drill hole locations were pegged using either contract surveyors or handheld GPS units. After drilling, all drill hole locations are picked up by surveyors using an RTK system. All drill holes greater than 80m drilled by EXG are down hole surveyed by contractors using industry standard digital tools. • All RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg -3.5kg sample was collected. Where the original 1m samples were not collected, nominal 4m composite samples were collected by spear sampling individual 1m composite intervals. • Industry standard work undertaken by EXG has in most instances supported the grades and widths indicated by historic drilling – there is a risk inherent in this MRE that the historic drilling data is to some unknown extent biased or not representative as this cannot be demonstrated due to lack of QA/QC information.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Little information is available on the drilling techniques for the historical holes. However, holes have been drilled by Caris Corporation during 1984; by Getty Oil in 1984 and 1985 (using a Schramm T66H RC rig); by Aberfoyle during 1986, 1987; by MMC Management during 1993; by Goldfields during 1996 and 1998 (using a Schramm660 RC rig drilling 5.5" holes) and by Halycon during 2003 and 2004. • For (post 2011) EXG drilling, the RC drilling (Redmond Drilling – Schramm RC with cyclone attached) system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter). • All EXG drill core is orientated by the drilling contractor with a down the hole Ace system. Core diameter is noted in the assay results table for DC assay results.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Historical holes were generally sampled at 1m intervals which were split on site and reduced to samples of between 1-1.5kg in weight. A four-metre composite was taken at the same time which was assayed for Au and As by Kalgoorlie Assay Laboratory. Intervals containing anomalous gold were re-assayed using the 1m samples. The Goldfield holes were sampled on 1m intervals, with samples being placed on the ground. All dry samples were riffle split to 4kg and all wet samples were scoop sampled. Alternate samples were submitted for analysis, and infill samples were subsequently tested once any anomalous zones were identified. All alternate samples were analysed by either ALS or Analabs for gold by Fire Assay to 0.01ppm using a 50g charge • All EXG RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilized for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database. • The EXG DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained. • EXG RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the

Criteria	JORC Code explanation	Commentary
		database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample. • The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings. • Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All EXG RC samples are geologically logged directly into hand-held Geobank devices. • All EXG DC is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralization, shearing/foliation and any other features that are present • All EXG DC is photographed both wet and dry after logging but before cutting. • The entire lengths of EXG RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length and any core loss or voids intersected are recorded.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• EXG Exploration results reported for drill core are half core taken from the right-hand side of the core looking down hole. Core is cut by contractors with a diamond core saw and all sampling is conducted by Excelsior geologists. • All EXG RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database. • The EXG RC samples are sorted, oven dried, the entire sample is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge. • The EXG DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge. • EXG RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. EXG inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser. • In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. • The results of this field duplicate process are within acceptable limits, indicating that the RC sample results are repeatable. • For DC, no core duplicates (i.e. half core) have been collected or submitted. • The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• EXG has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been SGS Australia and Bureau Veritas Australia which has two facilities in Kalgoorlie. No complete details of the

Criteria	JORC Code explanation	Commentary
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	sample preparation, analysis or security are available for either the historic AC, DD or RC drilling results in the database. • The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 40g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine. • The QC procedures are industry best practice. The laboratory is accredited and uses its own certified reference material. The laboratory has 2 duplicates, 2 replicates, 1 standard and 1 blank per 50 fire assays. • EXG submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures EXG examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No independent verification of significant intersections has been undertaken. • A number of RC holes have been drilled throughout the deposit to twin historical RC holes. These twinned holes returned results comparable to the original holes and were also used to collect geological information and material for metallurgical assessment. Both historical and new diamond drilling has been drilled to confirm geological interpretation and results obtained from RC drill holes. • Primary data is sent digitally every 2-3 days from the field to EXG's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• All drill holes have their collar location recorded from a handheld GPS unit. Downhole surveys are completed every 30m downhole. No detailed down hole surveying information is available for the historic RC or DD drilling. • EXG routinely contracted down hole surveys during the programmes of exploration drilling for each RC and DC drill hole completed using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications. • All drill holes and resource estimation use the MGA94, Zone 51 grid system. • The topographic data used was obtained from consultant surveyors and is based on a LiDAR survey flown in 2012. It is adequate for the reporting of Exploration Results and subsequent Mineral Resource estimates. The original final pit survey has been used to deplete the resource model.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The nominal exploration drill spacing is 40m x 20m with some cross sections filled to 10m. This spacing includes data that has been verified from previous exploration activities on the project • This report is for the reporting of the Mineral Resource Estimate. The drill spacing, spatial distribution and quality of assay results is sufficient to support the JORC classification of material reported within this report and is appropriate for the nature and style of mineralisation being reported. • The majority of holes were sampled at 1m, but when this isn't the case, sample compositing to 1m has been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of drilling is to grid east or west. The bulk of the mineralized zones are perpendicular to the drilling direction. Field mapping and geophysical interpretations supports the drilling direction and sampling method. • No drilling orientation and sampling bias has been recognized at this time.
Sample security	• *The measures taken to ensure sample security.*	• RC samples are delivered directly from the field to the Kalgoorlie laboratory by EXG personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an EXG generated sample submission list and reports back any discrepancies
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An internal review of sampling techniques and procedures was

Criteria	JORC Code explanation	Commentary
		completed in March 2014. No external or third-party audits or reviews have been completed.

Section 2 Reporting of Exploration Results – Bulletin South

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The results reported in this Announcement are on granted Mining tenements held by GPM Resources Pty Ltd, a wholly owned subsidiary of Excelsior Gold Limited. • At this time, the tenements are believed to be in good standing. There is a royalty of $2 per tonnes of ore removed payable to third parties.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and is used as a guide to EXG's exploration activities. Previous parties have completed both open pit and underground mining, geophysical data collection and interpretation, soil sampling and drilling. This report only comments on exploration results collected by EXG.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The primary gold mineralisation at Bulletin South is predominantly associated with a quartz rich dolerite unit with a strongly porphyritic texture and associated second order structures. The gold mineralisation is associated with quartz, carbonate, sulphide alteration. • Whilst structure and primary gold mineralisation can be traced to the surface, depletion has occurred in the top 10-20m • Historical working and shafts exist within the area, detailed mapping and sampling of these workings and structural measurements from orientated diamond core drilling assists with the geological interpretation.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ▪ *easting and northing of the drill hole collar* ▪ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ▪ *dip and azimuth of the hole* ▪ *down hole length and interception depth* ▪ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• No exploration results are presented
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density,*	• No exploration results are presented

Criteria	JORC Code explanation	Commentary
	groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources - Bulletin South

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• EXG data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the EXG Database Administrator and geological management prior to transmission to Cube. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the mineralised system appears to be relatively simple however the gold distribution is more complex. Cube believes that the continuity of mineralisation and volume controls are well established where drilling is at a nominal 40 x 20 m hole spacing. • The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole survey data. As such at several locations through the deposit the company has twinned historical holes to confirm results and location. • The close spaced (possibly RC) grade control drilling and mining pit floor exposure has allowed a detailed re-evaluation of the geological controls on mineralisation by EXG. The new interpretation of these controls impacts the estimation of the Mineral Resources and has triggered the need for the re-estimation. • The result of this revision is that the majority of the mineralisation of economic interest is associated with the (45-50-degree east dipping) ladder veins rather than the previous interpretation of a steeper shear hosted (80 to 90-degree dipping) discontinuous mineralisation.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The main body of mineralisation extends approximately 300m along strike (NNW-SSE- Azi 335 degrees), an average of 40m across strike (ENE-WSW) and 150m in elevation. Mineralisation is present at surface and is exposed on the historic pit floor and walls from previous mining activities.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.*	• Cube has used 3DM wireframes to constrain the mineralised zone, based on exploration (40m x 20m) and GC (3m x 5m) drill hole data. The wireframes were constructed on a sectional basis using the Surpac software package. • A low grade "waste" domain was also modelled around the main mineralisation domain to the extents of the available drill data. • Drill intervals falling within the wireframed estimation domains were coded in the database. Composites of gold assay values were then generated using the Surpac™ "best-fit" method. On the basis of sample size, selectivity assumption (2mE-W x 5mN-S x 2.5mRL) and selected estimation methodology, Cube chose to use 1m downhole composites for this estimation. • It was evident that the estimation domains contained a limited number of outlier gold values, necessitating the use of gold grade top cuts to mitigate estimation risk. The highly positively skewed gold distributions mean that conventional linear estimation methods, such as Ordinary Kriging ("OK") are very likely to produce over-smoothed block grade estimates. For this reason, it was decided to undertake grade estimation using the non-linear Localised Uniform Conditioning ("LUC") method. • The following criteria were considered when choosing gold grade top cuts:

Criteria	JORC Code explanation	Commentary
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	○ The coherence and stability of the upper tail of the gold grade distribution; ○ Visual inspection of the spatial location of outlier values; ○ Sensitivity tests to gauge the effect of various top cuts on mean gold grade; • The statistics show that there is not a large reduction in mean grade (approx. -7%) following top cutting of the main mineralisation domain (100). Cube therefore does not consider the use of top cutting to be a material risk with respect to the estimation. • The LUC estimates were implemented using the Isatis® software package before being transferred into a Surpac™ block model. • No consideration has been made of by-products. • A number of check estimates have been undertaken by Cube as part of the validation steps. Firstly, a comparison of an OK grade control model, based only on the tight 3m x 5m grade control drilling, to an LUC model undertaken using only the exploration drill data was undertaken within the volume covered by GC drilling (now mostly mined out). Results indicate that the LUC model based on only exploration data reconciles to the OK GC model to within 9% of contained metal at 0.6g/t and 0.9g/t Au cut-offs. This comparison gives some indication as to how the LUC method might perform in the remaining in-situ ground, which is largely informed by exploration data only. The final reported LUC model, however, is based on all available data (i.e.. both exploration and GC drill data). • Inverse Distance Squared (ID2) check estimates were undertaken for comparison to both the LUC model based on only the resource data, and also for the reported LUC model based on resource and GC data. This comparison demonstrated a good level of agreement between global mean ID2 and LUC grades. • The LUC model was also validated by comparison of the block estimates to the informing composite data: ○ Global mean undeclustered and declustered composite grades were compared to the block estimates. Agreement was good. ○ Semi-local comparison of undeclustered and declustered composite grades to block estimates was undertaken using swath plots by northing and RL slices. Observed agreement was good. ○ Visual 3D comparison of raw assay grades to LUC block estimates revealed good spatial correspondence. • Block size for gold grade estimation was chosen in consultation with EXG and with due regard to data spacing, orebody geometry, and practical mining considerations. The estimation panel size used was 6mE-W x 10mN-S x 5mRL. An SMU block size of 2mE-W x 5mN-S x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size corresponds exactly to the current block size for grade control modelling and mining selection at the nearby and currently active Zoroastrian Central pit, conforms to the mining flitch height and is elongated in the approximately the same direction (north-south axis) as the trend of the mineralised envelope at Bulletin South. While the data spacing in areas other than the grade control drilled volume would be considered too wide for such a small block size if conventional linear estimation methods were used, Cube has used the LUC method, which is intended specifically for estimating the grade distribution of smaller blocks.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a 0.2 to 0.3g/t Au cut off which represents the mineralised shear modelled domains. • The MR has been reported above a 0.6g/t Au cut-off. This has been chosen to allow the application of modifying factors for the estimation of Mineral Reserves which indicate an economic cut-off of 0.9 to 1g/t Au.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• This MRE has been undertaken on the assumption of open pit mining methods, the selection of SMU size was based on the scale of mining equipment currently in use at Zoroastrian Central.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to*	• Metallurgical testwork was conducted by ALS Global, on one sample of representative material, in their Perth laboratory. Overall cyanide leaching of Au in a 24-hour period was 98.2% with 77%

Criteria	JORC Code explanation	Commentary
	consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	being recovered by gravity.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• There are no existing environmental issues concerning the extraction or disposal of waste or tailing material known to Cube.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• There are limited sources of relevant experimental bulk density data consisting of 14 determinations from 2015 EXG DD. • These determinations are all on competent rock both within the mineralised porphyry and surrounding waste mafic rocks. • On balance Cube believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density. Cube have used assumed bulk density values based on the interpreted weathering surfaces.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The geological model and continuity of the mineralised domain is currently well understood due to the GC drilling and mining exposure of the mineralised lodes. The MRE has been validated by "ground truth" methods whereby an estimate using only resource exploration drilling on a 40x20m collar spacing has been compared to a volume estimated by close spaced GC drilling. The results of this comparison confirm that the deeper MR areas estimated outside the grade control volumes can be expected to be representative of what will be defined for mining by the GC data to within +-10% contained metal. • The MRE has been classified as Measured, Indicated and Inferred based on the assessment of geological continuity, sample representivity and spacing and geostatistical summary parameters derived from the variogram models. • Mineralisation classified as Measured is within the primary porphyry domain with an average distance to sample data of 7-10m and an average slope of regression parameter of 0.72. • Mineralisation classified as Indicated is within the primary porphyry domain with an average distance to sample data of 12m and an average slope of regression parameter of 0.44. • Mineralisation classified as Inferred is within the primary porphyry domain or as isolated veins within the waste domain with an average distance to sample data of 18m and an average slope of regression parameter of 0.26. • Inferred material has been included in the waste domain to ensure that during potential mining these smaller occurrences are grade control checked for mineable volumes. • The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 13 November 2018 ASX:SPI '2.6Moz Consolidated JORC Resource for Bardoc Gold Project sets strong foundation for new Australian gold development' The competent person has reviewed this work
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The conditional simulation methodology of gold grade has been used to quantify potential variations in the grade, tonnes and metal for portions of the estimate. The simulated outcomes at a 0.5g/t Au cut-off demonstrate that probable variations in grade (+-14.3%), tonnes (+-5.0%) and metal (+-15.2%) are within reasonable expectations for moderate-to-high confidence. This relative accuracy summarised relates to a global mineral resource estimate of in-situ grade and tonnes within the potential pit design. Note that the conditional simulation cannot account for additional uncertainty due to sampling bias, volume or density estimation. • The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • The block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size.

JORC Table 1 Checklist of Assessment and Reporting Criteria – MAYDAY NORTH
Section 1 Sampling Techniques and Data – MayDay North

Criteria	JORC Code Explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Drill holes used in the estimate include 9 diamond holes ("DD") and 105 reverse circulation ("RC") holes. In addition, large number of regional Rotary Air Blast ("RAB") holes have been completed; • The majority of drilling was completed by Geopeko Limited and Sovereign Gold Limited. Barminco and Croesus Mining NL completed close spaced drilling prior to commencement of an open pit mine in 1999. • In 2013 SPM completed 10 holes for 790m; • In the deposit area, holes were generally vertical in the oxide zone or angled to the west in the primary zone to optimally intersect the mineralised zones; • RC samples were collected at 1m intervals from a rig mounted cyclone and riffle splitter; • For SPM RC drilling, samples were composited into 4m intervals for assay with anomalous intervals resubmitted at 1m intervals. The majority of RC holes were sampled and assayed at 1m intervals; • DD core was cut using a diamond saw and half core samples submitted for analysis.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• The majority of RC drilling used a face sampling bit but records were not available for much of the historic drilling; • Diamond drilling was carried out with HQ and NQ sized equipment with standard tube;
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Recoveries from SPM drilling were good with RC samples visually monitored; • Diamond core recovery was recorded in the drill logs and was excellent; • There is no identified relationship between sample recovery and sample grades.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All diamond drill holes were logged for recovery, RQD, geology and structure; • RC drilling was logged for various geological attributes; • All drill holes were logged in full.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• RC samples were collected from a rig mounted cyclone and or free standing splitter in one metre intervals; • For historic RC and DD drill programs, samples were assayed at contract laboratories using fire assay or aqua regia analysis. • SPM samples were assayed at the Aurum laboratory in Perth. Samples were dried and a 1kg split was pulverized to 80% passing 75 microns; • SPM drilling included QAQC protocols including blanks, standards and duplicates. Results were satisfactory and supported the use of the data in resource estimation; • No QAQC reports have been located for the historic drilling data; • Sample sizes are considered appropriate to correctly represent the gold mineralisation based on: the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and assay value ranges for Au.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• For SPM drilling, analysis was by fire assay and atomic absorption spectrometry (AAS) finish at the Aurum laboratory in Perth; • For historic RC and DD drilling, analytical procedures are not known; • The analytical technique used by SPM approaches total dissolution of gold in most circumstances; • SPM drilling included QAQC protocols including blanks, standards and duplicates. Results were satisfactory and supported the use of the data in resource estimation.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No independent verification of significant intersections has been carried out; • Multiple phases of drilling have confirmed the overall tenor and distribution of mineralisation and the successful open pit mining in 1999/2000 verified the grade and thickness of the interpreted zones; • Primary data documentation for recent drilling is electronic with appropriate verification and validation; • Historic data was compiled from company and WAMEX reports; • Assay values that were below detection limit were adjusted to equal

Criteria	JORC Code Explanation	Commentary
		half of the detection limit value.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Drill hole collar coordinates used MGA transforms from a local grid; • Drill hole collars have been surveyed either by licensed surveyors or using differential or hand held GPS; • Topographic control is from detailed mine surveys carried out during the open pit mining in 1999/2000.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• For RC and DD drilling, holes were generally vertical and drilled on a regular 20m by 20m grid with some 10m infill. Deeper drilling is widely spaced and angled to the west; • The drilling has demonstrated sufficient continuity in both geological and grade continuity to support the definition of Mineral Resource, and the classifications applied under the 2012 JORC Code; • Samples used in the Mineral Resource were based largely on 1m samples without compositing. Some compositing of DD holes was required to provide equal support during estimation.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Holes were generally vertical for testing of the flat lying supergene mineralisation; • Deeper holes were angled at -60o to 270o to optimize the intersection angle with the east dipping primary mineralisation; • No orientation based sampling bias has been identified in the data.
Sample security	• *The measures taken to ensure sample security.*	• SPM samples were carefully identified and bagged on site for collection and transport by commercial or laboratory transport.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of sampling techniques were located; • The majority of work was carried out by reputable companies using industry standard methods.

Section 2 Reporting of Exploration Results – MayDay North

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	• The deposit is located within Mining Lease M27/140 and M27/145 which is owned by Strategic Projects Mining Pty Ltd.; • The M27/140 was granted for a term of 21 years and expires on 1 May 2032; • M27/145 was granted for a term of 21 years and expires on 14 November 2032; • Tenements M27/140 & M27/102 will be subject to a Royalty of $15 per ounce for the first 50,000oz mined on completion of the acquisition by Bardoc. In addition a potential royalty of Recovered grade (g/t) x $5 is payable (to be confirmed following further investigation) • Tenement M27/140 is currently subject to 3 Forfeiture notices; 1 for the late payment of rent with a fine payable; 1 Regulation 50 notice for non-compliance with reporting requirement; and a Regulation 50 Notice for non-compliance with expenditure and late lodgement of Form 5. • Tenement M27/145 has 1 outstanding Forfeiture notice for non-compliance with reporting requirements.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The tenement was previously held by various companies. The majority of drilling was completed by previous operators since the 1980's; • The project was acquired by SPM in 2013. SPM completed 10 RC drill holes in 2014.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The basement geology of the project comprises a northeast trending sequence of fine to medium grained volcanics dipping at 45o to the northeast. Lithologies vary from gabbro in the west to foliated basalt in the east of the project area. • Primary gold mineralisation occurs in a tabular, brecciated zone adjacent to the sheared contact between an amphibole basalt and a chloritic basalt. Sulphide veining and brittle fracturing filled with silica, pyrite and arsenopyrite are the dominant hosts of mineralisation. The mineralised zone dips at approximately 45° northeast and has a typical thickness of 10-20m. • A deep weathering profile has developed over the Mayday North deposit and is typically 40m below surface. Distinct depletion and remobilisation of gold is evident within the oxide profile and as a result of this, substantial zones of flat lying, supergene gold mineralisation have formed above the primary mineralisation. A high grade portion of the supergene mineralisation was exploited in a small open pit.
Drill hole information	• *A summary of all information material to the under-standing of the exploration results including a tabulation of the following information for all Material drill holes:*	No exploration results are presented

Criteria	JORC Code explanation	Commentary
	• *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g.'down hole length, true width not known').*	No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced Reporting	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large- scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources – MayDay North

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	• A pXRF study undertaken by BDC geologists have shown the deposit to lie upon a contact between a Basaltic and Andesitic unit. • Shearing along this contact has created suitable architecture for fluid flow and a hospitable environment for mineralisation. • The confidence in the geological interpretation is good, and primary mineralised structures are well defined by drilling.

Criteria	JORC Code explanation	Commentary
	• *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Mineralisation consists of a steeply dipping Primary contact/shear zone directly associated with the contact, a steeply dipping shear zone with detaches from the contact, and a flat strongly enriched supergene zone which was the focus of previous mining. • Primary mineralisation is easily identified in geological logging and displays good continuity between wide spaced drilling.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The Mineral Resource area extends over a strike length of 500m and includes the 270m vertical interval from 370mRL to 100mRL.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• BDC has used 3DM wireframes interpreted on a sectional basis to constrain the mineralised envelope at 0.3g/t, based on RC drilling at spacing's down to 15m N x 15m E-W. • A further high grading zone modelled at 1.5g/t defines the primary contact zone was created using an implicit approach. • 1m compositing was considered appropriate. 1m composite intervals falling within the wire framed estimation domains were coded in the database. • Influences of extreme sample distribution outliers were reduced by top-cutting on a domain basis. Top-cuts were decided by using a combination of methods including grade histograms, log probability plots and statistical tools plus visual inspection of the spatial location of outlier values. Based on this statistical analysis of the data population some top cuts were applied, including domains 1000 (12g/t), 1500 (15g/t) and supergene (12g/t) • Grade estimation using Ordinary Kriging (OK) was completed using Micromine software for Au only. • Directional variograms were modelled by domain using normal score variograms. Nugget values are moderately low (around 30%) and structure ranges up to 70m. • Block model was constructed with blocks of 4m (E) by 5m (N) by 5m (RL). Sub celling was permitted in the Z direction to 2.5m. All estimations were completed to the parent cell size. Discretisation was set to 3 by 3 by 3 for all domains. • Three estimation passes were used with the first pass using a limit of 35m, the second pass 70m and the third pass searching a large distance to fill the blocks within the wire framed zones. Each pass used a maximum of 20 samples, a minimum of 9 samples and maximum per hole of 4 samples. • Search ellipse sizes were based primarily on a combination of the variography and the trends of the wire framed mineralized zones. Hard boundaries were applied between all estimation domains. • Validation of the block model included a volumetric comparison of the resource wireframes to the block model volumes. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting, northing and elevation. Visual comparisons of input composite grades vs. block model grades were also completed.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The Mineral Resource has been reported at a 0.5g/t Au cut-off based on assumptions about economic cut-off grades for open pit mining. • The reported portion of the Mineral Resource was limited to a vertical depth of 200m.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Portions of the deposit are considered to have sufficient grade and continuity to be considered for open pit mining; • No mining parameters or modifying factors have been applied to the Mineral Resource.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Supergene mineralisation displayed good recoveries using conventional processing during the mining phase in 1999/2000; • Preliminary metallurgical test work suggests a refractory component to the primary mineralisation. • BDC completed a suite of bottle roll test and the refractory nature is supported and requires further testwork.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and*	• The area is not known to be environmentally sensitive and there is no reason to think that approvals for further development including the dumping of waste would not be approved.

Criteria	JORC Code explanation	Commentary
	processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Five Diamond drillholes were drilled and assessed for bulk density, using the water displacement method, during 2019 and 2020. • The measurements are slightly higher than previously assumed due to sulphide component. • The Oxide is relatively high but makes up a very small part of the resource so is not deemed material. • The author is confident in using these measurements as part of a JORC compliant resource • Oxide: 2.1 • Transition: 2.64 • Fresh: 2.9
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. • In part, the lodes have been drilled down to 15m x 15m spacing, on northing and easting, with drill lines running approximately ENE-WSW. To the north and south drilling is at greater spacing. • The MRE is classified into indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. • The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 30 September 2020 ASX:BDC Updated Mineral Resource for Bardoc Gold Project Increases confidence in the 1Moz Production Target*' The competent person has reviewed this work.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource Estimates is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • The statement relates to global estimates of tonnes and grade.

JORC Table 1 Checklist of Assessment and Reporting Criteria – DUKE NORTH
Section 1 Sampling Techniques and Data – Duke North

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• The mineralization was sampled by Reverse Circulation (RC) drilling on a nominal 20m x 20m grid spacing. The holes were generally drilled towards grid west at 60o to optimally intersect the mineralized zones. All sampling from inclined RC drilling • Excelsior Gold (EXG) - All RC recovered samples were collected and passed through a cone splitter on 1m intervals. The recovered samples were passed through a cone splitter and a representative 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory for gold assay. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 50g charge. Approximately 200g of pulp material is returned to Excelsior for storage and potential re-assay at a later date • Pancontinental (Pancon) – RC drilling to obtain 1m samples which were riffle split to approx.3kg for gold analysis by 50g charge fire assay • Goldfields (GLD) - All RC holes sampled at 1m intervals and placed

Criteria	JORC Code explanation	Commentary
		on the ground (Non resource drilling) or in plastic bags (resource drilling) from the cyclone. Dry samples were riffle split to ~4kg. Wet samples were scoop sampled. All samples analysed by fire assay, 50g charge
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• EXG - The RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. • Pancon - 5", 5,25" and 5.5" RC drilling on local grid • GLD – 5.5" RC on local grid
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• EXG - All RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilized for the collection of field duplicate samples. The weight of the sample in the plastic bag is recorded and the total sample recovery can be calculated. All samples received by the laboratory are weighed with the data collected and stored in the database. The DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained. • Pancon – No information on sample recoveries • Goldfields – No information on sample recovery • EXG - RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample • EXG - Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction. The sample recovery vs gold grade is assessed on an ongoing basis throughout the drilling program.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• EXG - All RC samples are geologically logged. Specifically, each interval is visually inspected with a hand lens and the following parameters are recorded where observed: weathering, regolith, rock type, alteration, mineralization, hardness, shearing/foliation and any other features that are present. All drill core is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralization, hardness, shearing/foliation and any other features that are present. This information is transferred electronically from the geologist to the database. Where possible the logging records the abundance of specific minerals or the amount of alteration (including weathering) using defined ranges. The entire length of RC holes are logged on a 1m interval basis, ie 100% of the drilling is logged, where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length and any core loss or voids intersected are recorded. • Pancon - All holes were geologically logged, recording lithology, texture, grainsize, alteration minerals. Amounts of veining, alteration minerals and sulphide logged as a percentage. Entire holes logged • GLD - All holes were geologically logged, recording lithology, texture, grainsize, minerals. Amounts of veining, alteration minerals and sulphide logged as a percentage. Entire holes logged
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• EXG - All RC samples are put through a cone splitter and the representative sample is collected in a unique pre-numbered calico sample bag. The moisture of a sample is recorded in the database. The drilling method is designed to maximize sample recovery and representative splitting of samples. The drilling methods also maximize dry samples as they are designed to keep water out of the hole when possible • Pancon - Samples collected every 1m in large plastic bags from the cyclone. Each interval riffle split into ~4kg samples. Unknown what sampling method was utilized or wet samples, although water intersections are not noted in any historic or recent EXG drilling • GLD - All holes sampled at 1m intervals and placed in plastic bags from the cyclone. Dry samples were riffle split to ~4kg. Wet

Criteria	JORC Code explanation	Commentary
		samples were scoop sampled. • EXG - The sample preparation technique for all samples follows industry best practice, by an accredited laboratory. The techniques and practices are appropriate for the type and style of mineralization. The RC samples are sorted, oven dried, riffle split to 3kg as required, then pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge. The DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge. • Pancon – Exact sample preparation techniques unknown but sample prep carried out by accredited laboratory (SGS or AAL) and assumed to be to industry standard and appropriate for sample type. • GLD - Exact sample preparation techniques unknown but sample prep carried out by accredited laboratory (SGS or AAL) and assumed to be to industry standard and appropriate for sample type. • EXG - RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. Excelsior inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser. • Pancon – A system of field duplicates and standards were submitted with each dispatch to monitor laboratory performance, as stated in annual (WAMEX) reports. Results are not available for analysis. • GLD - A system of resamples with standards and blanks were submitted with all samples dispatched, as stated in annual (WAMEX) reports. Results are not available for analysis. • EXG - In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. • The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• EXG, Pancon & GLD - Analysis by fire assay, 50g charge. The fire assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine. • Not used for reporting or interpretation of gold mineralization. • EXG - The QC procedures are industry best practice. The laboratory is accredited and uses its own certified reference material. The laboratory has 2 duplicates, 2 replicates, 1 standard and 1 blank per 50 fire assays. At the same time Excelsior submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures Excelsior examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists. Field duplicates exhibit relatively poor levels of precision attributable to a naturally high grade variance between closely spaced samples. Lab repeat (blind and non blind) precision is good. Accuracy is acceptable • Pancon & GLD – only assay repeat data available for analysis and precision is good

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• EXG – Drill intersection have been inspected by EXG geologists other than the one responsible for this report. Independent personnel have not viewed drill intersections. • Pancon & GLD – Unknown • EXG – Holes not deliberately twinned but widths and tenor of mineralization were similar to historic RC intersections • EXG - Primary data is sent digitally every 2-3 days from the field to Excelsior's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database. • Pancon – Handwritten geology logs digitally captured. Assay data management procedures unknown • GLD – Data management procedures unknown • No adjustments or calibrations were made to any assay data used in this report
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• EXG - Prior to drilling the drill hole locations were pegged using either contract surveyors or hand held GPS units. After drilling, all drill hole locations are picked up by contract surveyors using a RTK system. RC drill holes were not downhole surveyed, all holes drilled to < 100m depth. All drill holes are drilled and recorded on MGA94, Zone 51 • Pancon – Collar locations surveyed on local grid by qualified surveyor from Paddington mine. Local grid to MGA94 zone51 conversion by 2 point transformation. Downhole surveys carried out by contract surveyors, Downhole Surveys. Results of surveying showed that RC holes remained straight with a slight shift of up to 2o in dip and 5o in azimuth. By the bottom of the hole most holes had straightened to within 1o of planned dip and azimuth. • GLD – Collars surveyed by unknown method. Holes not down hole surveyed. • The topographic data used was obtained from consultant surveyors and is based on a LiDaAR survey flown in 2012. It is adequate for the reporting of Exploration Results and subsequent Mineral Resource estimates. Historic underground is known to have existed on the deposit, the extents of which are unknown. The mineral resource has not been depleted for historic mining
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The nominal drill spacing is 20m x 20m. This spacing includes data that has been verified from previous exploration activities on the project. • The data spacing is sufficient to establish geological and grade continuity to support the definition of Mineral Resource and classifications as defined under the JORC 2012 code • Sampled have been composited for resource calculations
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of drilling is inclined to local grid west (~240o MGA). The bulk of the mineralized zone is perpendicular to the drilling direction. • No drilling orientation and sampling bias has been recognized at this time.
Sample security	• *The measures taken to ensure sample security.*	• Unknown for earlier operators • EXG - Sample security is part of Excelsior's QAQC and sampling procedures. RC samples are delivered directly from the field to the Kalgoorlie laboratory by Excelsior personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an Excelsior generated sample submission list and reports back any discrepancies. Drill core is transported daily directly from the drill site to Excelsior's secure core processing facility by Excelsior personnel with no detours. The core is then placed on racks within a secure shed and processed until it requires cutting. Core is then transported directly by Excelsior's staff to the Kalgoorlie laboratory where it is cut in half by laboratory staff and then sampled by Excelsior staff. The core is then prepared for assay in Kalgoorlie to the pulverizing stage whereupon the laboratory transports it using a contractor directly to their Perth based assay facility.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• EXG - An internal review of sampling techniques and procedures was completed in March 2013. During 2016 Cube Consulting PTY reviewed EXG sampling practices as part of a review of EXG's Zoroastrian deposit. Cube established that sample collection,

Criteria	JORC Code explanation	Commentary
		numbering, tracking and handling is undertaken by trained EXG personnel with geological support and appears to be of industry standard. • The Duke North Mineral Resource has not been externally reviewed.

Section 2 Reporting of Exploration Results Duke North

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Duke North resource is on granted Mining Leases held by GPM Resources Pty Ltd, a wholly owned subsidiary of Excelsior Gold Limited. TENEMENT: M24/134 — HOLDER: GPM Resources PTY LTD • At this time the tenements are believed to be in good standing. There are no known impediments to obtaining a license to operate, other than those set out by statutory requirements which have not yet been applied for.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and is used as a guide to Excelsior's exploration activities. Previous parties have completed, geophysical data collection and interpretation, soil sampling and drilling. All work appears to be of high quality and to industry standards of the time.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The mineralization at Duke North is an orogenic lode style deposit, predominantly hosted by mafic rocks. The mineralization strikes towards the NW (330o) and dips steeply NE. The mineralisation is generally within a medium to coarse grained intrusive dolerite, along its contact with an ultramafic unit. The mineral assemblage includes sericite>silica>pyrite/arsenopyrite+-leucoxene.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• No exploration results are presented
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical*	• No exploration results are presented

Criteria	JORC Code explanation	Commentary
	survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources Duke North

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the EXG Database Administrator and geological management prior to inclusion in the resource estimate. • Data utilized in the resource estimate is derived directly from the SQL database via queries (Views) • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is relatively simple, being along the sheared mafic/ultramafic contact. The continuity of mineralisation is well established where drilling is at a nominal 20 x 20 m hole spacing. • The mafic/ultramafic contact has been modelled and used to guide the interpretation of the mineralization. • There are no alternative interpretations. • The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole survey data. • Geological and grade continuity is established along strike for 900m. Continuity down dip is less well known, primarily due to lack of drilling.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation extends 900m along strike, and to a depth of 180m below surface. There is a depletion zone that extends to about 30m below surface in the south of the deposit. The mineralized structure varies from 1m to 23m in width.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• EXG has used 3DM wireframes to constrain the mineralised shear zone. All lodes have been interpreted on a sectional basis using the available exploration drilling data on predominantly 20m spaced lines. • On the basis of sample size, selectivity assumption (2mE x 5mN x 2.5mRL) and selected estimation methodology, a 1m down hole composite was selected for this estimation. 1m composite intervals falling within the wire framed estimation domains were coded in the database. • It was evident that some of the estimation domains contained extreme outlier gold values. The highly positively skewed gold distributions mean that conventional linear estimation methods, such as Ordinary Kriging ("OK") are very likely to produce over-smoothed block grade estimates. For this reason, it was decided to undertake grade estimation using the non-linear Localised Uniform Conditioning ("LUC") method. The following criteria were considered when choosing gold grade top cuts: • The coherence and stability of the upper tail of the gold grade distribution; • Visual inspection of the spatial location of outlier values; • The statistics show that in some cases there is a large reduction in mean grade and variability following top cutting. This is due to the elimination of the disproportionate effect of extreme outlier gold

Criteria	JORC Code explanation	Commentary
		grade values. It should be noted that the difficulties posed by these extreme outliers significantly increases the inherent risk in the gold grade estimates. • The LUC estimates were implemented using the Minestis® software package before being transferred into a Micromine™ block model. • No consideration has been given to by-products. • One check estimate has been undertaken by EXG as a validation step. This is a comparison to an OK resource model completed in 1997 by Goldfields. Results indicate that the LUC model based on exploration data compares to within 2% of contained metal at a 0.5g/t Au cut-off. • The estimation panel size used was 8mE x 10mE x 5mRL. An SMU block size of 2mE x 5mN x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size corresponds exactly to the block size for grade control modelling and mining of a similar deposit (Zoroastrian) by EXG. While the data spacing would be considered too wide for such a small block size if conventional linear estimation methods were used, EXG has used the LUC method, which is intended specifically for estimating the grade distribution of smaller blocks. • Metallurgical test work has not been done on Duke North mineralization. No other deleterious elements have been identified.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were based on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The selection of mineralised domains has used geological factors in conjunction with a ~0.3g/t Au cut off which represents the mineralised shear in all modelled domains. • The MRE has been reported above a 0.6g/t Au cut-off grade in the expectation of extraction by open pit mining methods.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• This MRE has been undertaken on the assumption of open pit mining methods, the selection of SMU size was based on the scale of mining equipment used during mining of a similar depost, Zoroastrian.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• The Duke North deposit has not been mined by conventional CIL/CIP methods. No Metallurgical test work has been completed and as such gold recoveries are unknown.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• There are no environmental issues concerning the extraction or disposal of waste or tailing material.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density determinations specific to Duke North ore and waste have not been undertaken. Results from a similar deposit in the region (Zoroastrian) have been utilized for this MRE. The following describe the sources of data used for the Zoroastrian deposit which is also dolerite hosted: • There are three sources of experimental bulk density data. • The first are the results of systematically collected DD core measurements and the second were downhole caliper SG readings every 0.1m for selected holes. The third source was bulk in-pit density determinations gathered by the mining staff. The DD core results provide a source of competent rock bulk density data however the data lacks any representative data for less competent oxide and transitional weathered rock. The in-pit data represents an attempt to measure the densities of the less competent material. • A total of 103 determinations have been made from 13 EXD DD holes. Determinations were made using two methods – for 5 holes the densities were determined using a down hole probe, the Auslog A659 Caliper Tool, the balance were selected core sent to the Genalysis Laboratory in Kalgoorlie where specific gravity was

Criteria	JORC Code explanation	Commentary
		determined by gravimetric technique. The majority of these data were taken on fresh dolerite core, with a small number of oxidised and transitional dolerite core results. The average depth of these determinations is 104m downhole. • A total of 190 in-pit determinations have been made between the 430m, and 400m pit floor RLs, at surveyed locations within 29 high and low grade ore mark-out blocks. The RLs of these determinations places them within the oxide and transitional weathering profile. • On balance EXG believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density. EXG have used assumed bulk density values for ore and waste based on the interpreted weathering surfaces. The bulk of the Duke North MRE is within dolerite and the densities applied are appropriate. For the minor portions of the MRE within sediment and ultramafic there are likely to some variations in bulk density.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The geological model and continuity of the mineralisation is currently well understood due to the relatively close spaced RC drilling. • The MRE is classified into indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. No areas of the model attain a measured classification. • There is some risk attached to the assumed densities applied to the model and this could impact negatively or positively on the tonnage and hence metal content. • The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 30 September 2019 ASX:BDC 'Bardoc Gold Resource Hits +3Moz underpinning mining studies and next phase of growth' The competent person has reviewed this work...
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • Grade and geological continuity can be estimated to a degree of accuracy high enough to allow for a proportion of the resource to be classified as Indicated or Inferred where appropriate. • The LUC block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size. Globally the accuracy of the estimate has not been quantified by simulation or similar methods. However the overall tonnage and grade compares favorably with a previous estimate, the total metal being within 2%.

JORC Table 1 Checklist of Assessment and Reporting Criteria – EL DORADO
Section 1 Sampling techniques and data – El Dorado

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The mineralization was primarily sampled by Reverse Circulation (RC) drilling on nominal 40m x 20m (N x E) grid spacing. The holes were generally drilled towards magnetic 235 degrees at varying angles to optimally intersect the mineralized zones. • Complete details are un-available for historic drilling. • BDC RC chip samples were collected and passed through a cone splitter in 1m intervals. • Limited numbers of field duplicates and screen fire assays have been undertaken to support sample representivity. • All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential additional assay at a later date
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple*	• RAB drilling makes up about 5% of the historic drilling and RC the other 95%. There are several campaigns of historic drilling between

Criteria	JORC Code explanation	Commentary
	or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	1984 and 1995. These holes are sometimes without documentation of the rig type and capability, core size, sample selection and handling. • For (post 2009) BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• All BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilized for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database. • BDC RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample. • Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All BDC RC samples are geologically logged directly into hand-held Geobank devices. • Whilst logging geologists record weathering, alteration minerals and intensity, host rock, mineralisation amongst other things for every metre. • The entire lengths of BDC RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All BDC RC samples are put through a cone splitter and the sub sample is collected in a unique pre-numbered calico sample bag. The moisture content and volume recovered of each sample is recorded in the database. • The BDC RC samples are sorted, oven dried, the entire sample is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge. • BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. BDC inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser. • In the field every 10th metre from cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. • The sample sizes are considered to be appropriate for the type, style, thickness, grain size and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been Intertek Genalysis and Bureau Veritas Australia. No complete details of the sample preparation, analysis or security are available for either the historic RAB, AC, DD or RC drilling results in the database. • The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 40g or 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by

Criteria	JORC Code explanation	Commentary
		an AA machine. • The QC procedures are industry best practice. The laboratories are accredited and use their own certified reference materials. • BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures BDC examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• BDC's Exploration Manager and Senior Resource Geologist have inspected RC chips and drill core in the field to verify the correlation of mineralized zones between assay results and lithology/alteration/mineralization. • A number of RC holes have also been drilled that confirmed results obtained from historical drillholes. No holes have been directly twinned, there are however holes within 15m of each other. • Primary data is sent digitally every 2-3 days from the field to BDC's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• All drill holes have their collar location recorded from a differential RTK GPS unit by consultant surveyors. Downhole surveys are completed every 30m downhole during drilling and 5m intervals after end of hole. Incomplete down hole surveying information is available for the historic RC or DD drilling. • BDC routinely contracted down hole surveys during the programmes of exploration drilling for each drill hole completed using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications. The current drill program was downhole surveyed by the drill contractor using north seeking gyro. • All drill holes and resource estimation use the MGA94, Zone 51 grid system. • The topographic data used was obtained from a LIDAR survey flown in 2012 and it is adequate for the reporting of Exploration Results and subsequent Mineral Resource Estimates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	• The nominal exploration drill spacing is 40m x 20m with many E-W cross-sections in-filled to 15m across strike. • The drill spacing, spatial distribution and quality of assay results is appropriate for the nature and style of mineralisation being reported in the Mineral Resource Estimate. • The majority of RC holes were sampled at 1m, but when this isn't the case, sample compositing to 4m has been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of previous drilling is to magnetic 235 degrees. The bulk of the mineralized zones are perpendicular to this drilling direction. The current drilling is oriented towards similar angles in order to intersect the lodes in the optimal direction. • No relationship between drilling orientation and sampling bias is recognised at this time. .
Sample security	• *The measures taken to ensure sample security.*	• RC samples are delivered directly from the field to the Kalgoorlie laboratory by BDC personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an BDC generated sample submission list and reports back any discrepancies
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An internal review of sampling techniques and procedures was completed in March 2018. No external or third party audits or reviews have been completed.

Section 2 Reporting of Exploration Results – El Dorado

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The El Dorado prospect is on a granted Mining Tenements held by GPM Resources Pty Ltd. • At this time the tenements are believed to be in good standing.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and is used as a guide to BDC's exploration activities. This includes work by Goldfields, Samantha, ARM and other exploration companies. Previous parties have completed historic and underground mining, geophysical data collection and interpretation, soil sampling and drilling. • The historical RC data is suitable for use in a Mineral Resource Estimate.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• El Dorado gold mineralisation is hosted predominantly in a 30-40 metre wide dolerite underlain to the west by the sediments and felsic volcaniclastics units of the Black Flag Sequence and overlain to the east by a talc-carbonated ultramafic. Brittle-ductile shear zones containing quartz veining and associated gold mineralisation occur on both of the contacts. The stratigraphic position and style of the primary gold mineralisation is very similar to other deposits known and mined in the area.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are presented

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• No further work is planned at this time

Tenement	Holder	Area (Ha)	Expiry Date
El Dorado M24/134	GPM Resources Pty Ltd	796.9	29/12/2029

Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	

Section 3 Estimation and Reporting of Mineral Resources – El Dorado

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is modelled as a set of sub-parallel, NNW-SSE striking, steeply dipping narrow lodes. • The continuity of mineralisation and volume controls are reasonably well established where drilling is at a nominal 15m (X) by 15m (Y) hole spacing. • The use of historical drilling provides a level of uncertainty as the company cannot validate all the QAQC data and downhole survey data. • The selection of mineralised domains has used geological factors such as geological contacts, logged quartz and sulphides in conjunction with a 0.3g/t cut-off for the underground model. Gold values transition from background to ore grades over a very short distance.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The mineralised corridor extends 350m NNW/SSE, up to 20m across (in multiple narrow lodes) and up to 150m vertically. • Mineralised structures are present at surface for some lodes.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• BDC has used 3DM wireframes interpreted on a sectional basis to constrain the mineralised zones, based on RC drilling at spacing's down to 15m N x 15m E-W. • 1m compositing was considered appropriate for the estimation given the sometimes narrow nature of the steep lodes. 1m composite intervals falling within the wire framed estimation domains were coded in the database. • Influences of extreme sample distribution outliers were reduced by top-cutting on a domain basis. Top-cuts were decided by using a combination of methods including grade histograms, log probability plots and statistical tools plus visual inspection of the spatial location of outlier values. Based on this statistical analysis of the data population some top cuts were applied, including domains D1 (25 ppm), D2 (20 ppm) and D3 (15 ppm). • Grade estimation using Ordinary Kriging (OK) was completed using Geovia Surpac™ software for Au only. • Directional variograms were modelled by domain using traditional variograms. Nugget values are moderate to high (around 50%) and structure ranges up to 70m. The variograms were poorly formed and with D1 containing the most samples, its modelled variography was applied to the remainder of the domains. • Block model was constructed with parent blocks of 2m (E) by 5m (N) by 10m (RL) and sub-blocked down to 0.5m (E) by 1.25m (N) by 2.5m (RL). All estimation was completed to the parent cell size. Discretisation was set to 5 by 5 by 2 for all domains. • Three estimation passes were used with the first pass using a limit of 30m, the second pass 60m and the third pass searching a large distance to fill the blocks within the wire framed zones. Each pass used a maximum of 12 samples, a minimum of 6 samples and maximum per hole of 3 samples. • Search ellipse sizes were based primarily on a combination of the variography and the trends of the wire framed mineralized zones. Hard boundaries were applied between all estimation domains. • Validation of the block model included a volumetric comparison of

Criteria	JORC Code explanation	Commentary
		the resource wireframes to the block model volumes. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting, northing and elevation. Visual comparisons of input composite grades vs. block model grades were also completed. • No consideration has been made to by-products.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A cut-off of 0.5g/t was chosen. • The adopted cut-off grades were based on assumptions of potential open pit mining & milling costs. • The project could be amenable to trucking to a mill.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• It is assumed the lodes would be mined using typical Eastern Goldfields open pit methodologies. • Further work, including additional drilling, will determine the optimal mining method for this material.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• There has been no metallurgical assumptions applied to the Mineral Resource Estimate. There has been no metallurgical testing of mineralisation at El Dorado.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• No milling operation scenario has been proposed, however very large gold mining operations exist only 15 kilometres from these prospects and local and regional environmental impacts have been manageable. It is likely that a similar scenario would exist with the project. • At this stage no environmental impact study completed at El Dorado.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Rock density is assumed – no actual measurements exist from El Dorado. • The following bulk densities have been assumed from nearby comparable operations: o Oxide: 1.8 o Supergene: 2.2 o Transition: 2.5 o Fresh: 2.7
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. • In part, the lodes have been drilled down to 15m x 15m spacing, on northing and easting, with drill lines running approximately ENE-WSW. To the north and south drilling is at greater spacing. • In part, the deposit is adequately drilled to have potentially been defined as higher confidence classification using only drilling density as a criteria. However, a number of issues remain unresolved with the base data and geological/structural models, including: • Rock density is assumed – no actual measurements exist from El Dorado. • Only diamond core hole has been drilled at depth in the northern part of the resource – further core holes are required to confirm geological and structural interpretation assumptions.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 30 September 2020 ASX:BDC 'Updated Mineral Resource for Bardoc Gold Project Increases confidence in the 1Moz Production Target*' The competent person has reviewed this work...

Criteria	JORC Code explanation	Commentary
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource Estimates is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • The statement relates to global estimates of tonnes and grade.

JORC Table 1 Checklist of Assessment and Reporting Criteria – TALBOT NORTH
Section 1 Sampling techniques and data – Talbot North

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The mineralization was primarily sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on nominal 40m x 20m (N x E) grid spacing. The holes were generally drilled towards grid east at varying angles to optimally intersect the mineralized zones. • Complete details are un-available for historic drilling. • Generally, BDC RC recovered chip samples were collected and passed through a cone splitter. • Limited numbers of field duplicates have been undertaken to support sample representivity. • All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential assay at a later date. The BDC DC samples are collected at nominated intervals by BDC staff from core that has been cut in half. Samples were oven dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential assay at a later date.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• There is a significant historical data set of drill and sample data for Talbot North. It is comprised of RAB 12%, trench sampling from open pit grade control 35% and RC/DC 53%. • For (post 2009) BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter). • All BDC drill core is orientated by the drilling contractor, usually every 3m run.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• All BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilized for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database. • The BDC DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained. • BDC RC 1m samples are visually logged for moisture content, sample recovery and contamination. This information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample.

Criteria	JORC Code explanation	Commentary
		• The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings. • Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All BDC RC samples are geologically logged directly into hand-held Geobank devices. • All BDC DC is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralization, shearing/foliation and any other features that are present • All BDC DC is photographed both wet and dry after logging but before cutting. • The entire lengths of BDC RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length (ie 100%) and any core loss or voids intersected are recorded.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All BDC RC samples are put through a cone splitter and the sample is bagged on site by the drilling contractor into pre-numbered calico bags. • All BDC RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database. • The BDC RC samples are sorted, oven dried, the entire sample is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 40g fire assay charge. • The BDC DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for a 40g fire assay charge. • BDC uses ½ core sawn by an automated core saw as standard procedure. The retained ½ of the core is the part of the core that contains the drill hole orientation line and depth intervals. The retained ½ is stored in systematic way in the Company's on site core yard. • BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. BDC inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser. • In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. • For DC, historically no core duplicates (i.e. half core) have been collected or submitted. For the current program the lab was requested to take a sample from the crush reject as a proxy for the field duplicate. • The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been Intertek Genalysis and Bureau Veritas Australia. No complete details of the sample preparation, analysis

Criteria	JORC Code explanation	Commentary
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	or security are available for either the historic AC, DD or RC drilling results in the database. • The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 40g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine. • The QC procedures are industry best practice. The laboratories are accredited and use their own certified reference materials. • BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures BDC examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• BDC's Exploration Manager and Senior Resource Geologist have inspected RC chips and drill core in the field to verify the correlation of mineralized zones between assay results and lithology/alteration/mineralization. • A number of RC holes have also been drilled that confirmed results obtained from historical drillholes. No holes have been directly twinned, there are however holes within 15m of each other. • Primary data is sent digitally every 2-3 days from the field to BDC's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• All drill holes have their collar location recorded from a differential RTK GPS unit by consultant surveyors. Downhole surveys are completed every 30m downhole during drilling and 5m intervals after end of hole. Incomplete down hole surveying information is available for the historic RC or DD drilling. • BDC routinely contracted down hole surveys during the programmes of exploration drilling for each drill hole completed using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications. The current drill program was downhole surveyed by the drill contractor using north seeking gyro. • All drill holes and resource estimation use the MGA94, Zone 51 grid system. • The topographic data used was obtained from a LIDAR survey flown in 2012 and it is adequate for the reporting of Exploration Results and subsequent Mineral Resource Estimates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The nominal exploration drill spacing is 40m x 20m with many E-W cross-sections in-filled to 15m across strike. There are several 10m spaced cross sections. • This report is for the reporting of recent exploration drilling. The drill spacing, spatial distribution and quality of assay results is appropriate for the nature and style of mineralisation being reported. • The majority of RC holes were sampled at 1m, but when this isn't the case, sample compositing to 4m has been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of previous drilling is to magnetic 0550. The bulk of the mineralized zones are perpendicular to this drilling direction. • The current drilling is oriented towards magnetic 0550 in order to intersect the lodes in the optimal direction. • There is not considered to be a sampling bias introduced from the drilling and geological (including mineralisation) features.
Sample security	• *The measures taken to ensure sample security.*	• RC samples are delivered directly from the field to the Kalgoorlie laboratory by BDC personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an BDC generated sample submission list and reports back any discrepancies • Drill core is transported daily directly from the drill site to BDC's core processing facility by BDC personnel. The core is then placed on racks and processed until it requires cutting. BDC cut and sample the core on site before transporting it with no detours to the

Criteria	JORC Code explanation	Commentary
		contract Kalgoorlie assay laboratory.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An internal review of sampling techniques and procedures was completed in March 2018. No external or third party audits or reviews have been completed.

Section 2 Reporting of Exploration Results – Talbot North

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Talbot North prospect is on a granted Mining Tenement held by GPM Resources Pty Ltd. Tenement: M24/133 — Holder: GPM Resources Pty Ltd — Area (Ha): 692.8 — Expiry Date: 29/12/2029 • At this time the tenements are believed to be in good standing.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and is used as a guide to BDC's exploration activities. This includes work by Goldfields, Samantha, Pancontinental and other exploration companies. Previous parties have completed historic and underground mining, geophysical data collection and interpretation, soil sampling and drilling. • The historical RC and DC data is suitable for use in a Mineral Resource Estimate
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Talbot North is located on the Bardoc tectonic Zone of the Kalgoorlie Terrane. It has three lithologies which strike NW and dip 65o to 80o to the south west. From west to east these are shale, basalt and ultramafic. The western sediments are part of the Black Flag Beds. The basalt varies in width from about 90m in the south to 40m in the north. The basalt is separated by two shale units of varying width between 30cm to 10m. Mineralisation lies almost entirely within the basalt, being both lithologically and structurally controlled. Mineralisation along the western contact is associated with a contact parallel quartz vein in the footwall. A pervasive chlorite-carbonate alteration with arsenopyrite is associated with the gold mineralisation. NE striking structures appear to dextrally offset the mineralisation in places and may increase gold grades locally.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are presented

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades*	• No exploration results are presented

Criteria	JORC Code explanation	Commentary
	and/or widths should be practiced to avoid misleading reporting of Exploration Results.	
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources – Talbot North

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is modelled as a set of sub-parallel, NW-SE striking, steeply dipping lodes. • The continuity of mineralisation and volume controls are reasonably well established where drilling is at a nominal 15-25m (X) by 25-40m (Y) hole spacing. • Additionally, an open pit was completed at Talbot North in the early 1990's. Mapping data and grade control data is available and was used to improve confidence the geology and mineralisation models. • The use of historical drilling provides a level of uncertainty as the company cannot validate all the QAQC data and downhole survey data. • The selection of mineralised domains has used geological factors such as geological contacts, logged quartz and sulphides. Gold values transition from background to ore grades over a very short distance.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation extends 600m NW/SE, up to 50m across strike (in multiple narrow lodes) and over 200m vertically. • Mineralised structures are present at surface for some lodes.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.*	• BDC has used 3DM wireframes interpreted on a sectional basis to constrain the mineralised zones, based on RC drilling at spacing's down to 20m N x 20m E-W. • 1m compositing was considered appropriate for the estimation given the narrow nature of the steep lodes. 1m composite intervals falling within the wire framed estimation domains were coded in the database. • Influences of extreme sample distribution outliers were reduced by top-cutting on a domain basis. Top-cuts were decided by using a combination of methods including grade histograms, log probability plots and statistical tools plus visual inspection of the spatial location of outlier values. Based on this statistical analysis of the data population some top cuts were applied. • Grade estimation using Ordinary Kriging (OK) was completed using Micromine software for Au only. • Directional variograms were modelled by domain using traditional variograms. Nugget values are low to moderate and range up to 81m. The considerable anisotropy between the major and semi-major axes indicates that gold grade is concentrated proximal to the shear intersections and does not extend far up or down dip within the steep shears. This is consistent with observations in drill holes where

Criteria	JORC Code explanation	Commentary
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	a high grade gold intersection can be bounded up-dip and down-dip by intersections of much lower tenor. • Block model was constructed with parent blocks of 5m (E) by 10m (N) by 5m (RL) and sub-blocked down to 1m (E) by 2m (N) by 2m (RL). All estimation was completed to the parent cell size. • Each pass used a maximum of 24 samples, a minimum of 8 samples for the initial estimation run. • Search ellipse sizes were based primarily on a combination of the variography and the trends of the wire framed mineralized zones. Hard boundaries were applied between all estimation domains. • Validation of the block model included a volumetric comparison of the resource wireframes to the block model volumes. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting, northing and elevation. Visual comparisons of input composite grades vs. block model grades were also completed. • No consideration has been made to by-products.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A cut-off of 0.4g/t was chosen. • The adopted cut-off grades were based on assumptions of potential open pit mining & milling costs. • The project could be amenable to trucking to a mill.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• It is assumed the lodes would be mined using typical Eastern Goldfields open pit methodologies. • Further work, including additional drilling, will determine the optimal mining method for this material.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• No metallurgical testwork has been completed on mineralisation at Talbot North by Bardoc Gold. • It is noted that a large pit was excavated and treated through the nearby Paddington Mill with a total of 307kt @ 1.67g/t Au for 35,500oz Au mined. The pit has been inactive since 2004.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• No milling operation scenario has been proposed, however very large gold mining operations exist only 10 kilometres from these prospects and local and regional environmental impacts have been manageable. It is likely that a similar scenario would exist with the project. • At this stage, there is no environmental impact study completed at Talbot North.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• A total of 78 determinations have been made from two new (2019) DD holes. • Determinations were made using Archimedes method on typically fresh to slightly weather rock. • In total 436 measurements were taken from the oxide and transitional zones. Also taken into consideration was some 2,500 measurements from the Talbot South Pit which is located 250m along strike to the south. • Oxide, supergene and transitional ore densities used were 1.65 kg/m3, 2.2 kg/m3 and 2.9 kg/m3 respectively • On balance BDC believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density. BDC have used assumed bulk density values for ore and waste based on the interpreted weathering surfaces.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified in part as Indicated and Inferred on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. • Indicated – Areas with drill spacing up to approximately 40mE x 40mN and with reasonable confidence in the geological interpretation. • Inferred – Areas with drill spacing in excess of 40mE x 40mN. These are less well informed regions of the model and generally only

Criteria	JORC Code explanation	Commentary
		receive an estimated grade on the third estimation run with relaxed estimation parameters.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 30 September 2019 ASX:BDC 'Bardoc Gold Resource Hits +3Moz underpinning mining studies and next phase of growth' The competent person has reviewed this work...
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource Estimates is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • The statement relates to global estimates of tonnes and grade.

JORC Table 1 Checklist of Assessment and Reporting Criteria – SOUTH CASTLEREAGH
Section 1 Sampling techniques and data – South Castlereagh

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The mineralization was primarily sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on nominal 40m x 20m (N x E) grid spacing. The holes were generally drilled towards grid east at varying angles to optimally intersect the mineralized zones. • Complete details are un-available for historic drilling. • Generally, BDC RC recovered chip samples were collected and passed through a cone splitter. • Limited numbers of field duplicates have been undertaken to support sample representivity. • All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential assay at a later date. The BDC DC samples are collected at nominated intervals by BDC staff from core that has been cut in half. Samples were oven dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential assay at a later date.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• RAB drilling makes up about 30% of the historic drilling and RC the other 70%. There are several campaigns of historic drilling between 1983 and 2012. These holes are sometimes without documentation of the rig type and capability, core size, sample selection and handling. • For (post 2009) BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter). • All BDC drill core is orientated by the drilling contractor, usually every 3m run.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• All BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilized for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database. • The BDC DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is

Criteria	JORC Code explanation	Commentary
		logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained. • BDC RC 1m samples are visually logged for moisture content, sample recovery and contamination. This information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample. • The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings. • Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All BDC RC samples are geologically logged directly into hand-held Geobank devices. • All BDC DC is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralization, shearing/foliation and any other features that are present • All BDC DC is photographed both wet and dry after logging but before cutting. • The entire lengths of BDC RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length (ie 100%) and any core loss or voids intersected are recorded.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All BDC RC samples are put through a cone splitter and the sample is bagged on site by the drilling contractor into pre-numbered calico bags. • All BDC RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database. • The BDC RC samples are sorted, oven dried, the entire sample is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 40g fire assay charge. • The BDC DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for a 40g fire assay charge. • BDC uses ½ core sawn by an automated core saw as standard procedure. The retained ½ of the core is the part of the core that contains the drill hole orientation line and depth intervals. The retained ½ is stored in systematic way in the Company's on site core yard. • BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. BDC inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser. • In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. • For DC, historically no core duplicates (i.e. half core) have been collected or submitted. For the current program the lab was requested to take a sample from the crush reject as a proxy for the field duplicate.

Criteria	JORC Code explanation	Commentary
		• The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been Intertek Genalysis and Bureau Veritas Australia. No complete details of the sample preparation, analysis or security are available for either the historic AC, DD or RC drilling results in the database. • The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 40g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine. • The QC procedures are industry best practice. The laboratories are accredited and use their own certified reference materials. • BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures BDC examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• BDC's Exploration Manager and Senior Resource Geologist have inspected RC chips and drill core in the field to verify the correlation of mineralized zones between assay results and lithology/alteration/mineralization. • A number of RC holes have also been drilled that confirmed results obtained from historical drillholes. No holes have been directly twinned, there are however holes within 15m of each other. • Primary data is sent digitally every 2-3 days from the field to BDC's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• All drill holes have their collar location recorded from a differential RTK GPS unit by consultant surveyors. Downhole surveys are completed every 30m downhole during drilling and 5m intervals after end of hole. Incomplete down hole surveying information is available for the historic RC or DD drilling. • BDC routinely contracted down hole surveys during the programmes of exploration drilling for each drill hole completed using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications. The current drill program was downhole surveyed by the drill contractor using north seeking gyro. • All drill holes and resource estimation use the MGA94, Zone 51 grid system. • The topographic data used was obtained from a LIDAR survey flown in 2012 and it is adequate for the reporting of Exploration Results and subsequent Mineral Resource Estimates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The nominal exploration drill spacing is 40m x 20m with many E-W cross-sections in-filled to 15m across strike. There are several 10m spaced cross sections. • This report is for the reporting of recent exploration drilling. The drill spacing, spatial distribution and quality of assay results is appropriate for the nature and style of mineralisation being reported. • The majority of RC holes were sampled at 1m, but when this isn't the case, sample compositing to 4m has been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of previous drilling is to magnetic east. The bulk of the mineralized zones are perpendicular to this drilling direction. • The current drilling is oriented towards local grid east (magnetic 90 degrees) in order to intersect the lodes in the optimal direction. • There are 2 core holes drilled towards magnetic 142 degrees. In this orientation the intersection of the mineralised lodes is at an oblique angle, resulting in wider drill intercepts than the true widths of the mineralised lodes. In this case there is a sampling bias whereby intercept widths are greater than the true widths of mineralised lodes.

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	• RC samples are delivered directly from the field to the Kalgoorlie laboratory by BDC personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an BDC generated sample submission list and reports back any discrepancies • Drill core is transported daily directly from the drill site to BDC's core processing facility by BDC personnel. The core is then placed on racks and processed until it requires cutting. BDC cut and sample the core on site before transporting it with no detours to the contract Kalgoorlie assay laboratory.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An internal review of sampling techniques and procedures was completed in March 2018. No external or third party audits or reviews have been completed.

Section 2 Reporting of Exploration Results – South Castlereagh

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The South Castlereagh prospect is on a granted Mining Tenement held by GPM Resources Pty Ltd. Tenement: M24/348 — Holder: GPM Resources Pty Ltd — Area (Ha): 610.5 — Expiry Date: 10/01/2032 • At this time the tenements are believed to be in good standing.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and is used as a guide to BDC's exploration activities. This includes work by Goldfields, Samantha, ARM and other exploration companies. Previous parties have completed historic and underground mining, geophysical data collection and interpretation, soil sampling and drilling. • Excelsior Gold excavated a small open pit 500m north along strike at "Castlereagh" in 2015. • The historical RC data is suitable for use in a Mineral Resource Estimate
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The primary gold mineralisation in the South Castlereagh area is predominately associated with a 10-20m wide shear zone and associated second order structures adjacent to an ultramafic and mafic contact. This mineralisation is associated with intense shearing and quartz, sericite, carbonate, sulphide alteration. The development of possible stockworks at intersections of structures is also interpreted. Whilst structures and primary gold mineralisation can be traced to the surface depletion has occurred in the top 20-30m and again through the transitional zone. Sub-horizontal supergene enrichment blankets occur throughout the regolith. Historical workings and shafts exist within the area. Detailed mapping and sampling of these workings and structural measurements forms the basis of the geological interpretation.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are presented

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between	• *These relationships are particularly important in the reporting of Exploration Results.*	• No exploration results are presented

Criteria	JORC Code explanation	Commentary
mineralisation widths and intercept lengths	• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources – South Castlereagh

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is modelled as a set of sub-parallel, N-S to NNW-SSE striking, steeply dipping narrow lodes. • The continuity of mineralisation and volume controls are reasonably well established where drilling is at a nominal 15-25m (X) by 15-25m (Y) hole spacing. • The use of historical drilling provides a level of uncertainty as the company cannot validate all the QAQC data and downhole survey data. • The selection of mineralised domains has used geological factors such as geological contacts, logged quartz and sulphides in conjunction with a 0.3g/t cut-off for the underground model. Gold values transition from background to ore grades over a very short distance.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mineralisation extends 450m NNW/SSE, up to 50m east/west (in multiple narrow lodes) and up to 190m vertically. • Mineralised structures are present at surface for some lodes.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.*	• BDC has used 3DM wireframes interpreted on a sectional basis to constrain the mineralised zones, based on RC drilling at spacing's down to 20m N x 20m E-W. • 1m compositing was considered appropriate for the estimation given the narrow nature of the steep lodes. 1m composite intervals falling within the wire framed estimation domains were coded in the database. • Influences of extreme sample distribution outliers were reduced by top-cutting on a domain basis. Top-cuts were decided by using a combination of methods including grade histograms, log probability plots and statistical tools plus visual inspection of the spatial location of outlier values. Based on this statistical analysis of the data

Criteria	JORC Code explanation	Commentary
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	population some top cuts were applied, including domains D1 (15 ppm), D2 (25 ppm) and D5 (3 ppm). • Grade estimation using Ordinary Kriging (OK) was completed using Geovia Surpac™ software for Au only. • Directional variograms were modelled by domain using traditional variograms. Nugget values are high (around 50%) and structure ranges up to 70m. The variograms were poorly formed and with D1 containing the most samples, its modelled variography was applied to the remainder of the domains. • Block model was constructed with parent blocks of 2m (E) by 10m (N) by 10m (RL) and sub-blocked down to 0.5m (E) by 2.5m (N) by 2.5m (RL). All estimation was completed to the parent cell size. Discretisation was set to 5 by 5 by 2 for all domains. • Three estimation passes were used with the first pass using a limit of 30m, the second pass 60m and the third pass searching a large distance to fill the blocks within the wire framed zones. Each pass used a maximum of 12 samples, a minimum of 6 samples and maximum per hole of 3 samples. • Search ellipse sizes were based primarily on a combination of the variography and the trends of the wire framed mineralized zones. Hard boundaries were applied between all estimation domains. • Validation of the block model included a volumetric comparison of the resource wireframes to the block model volumes. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting, northing and elevation. Visual comparisons of input composite grades vs. block model grades were also completed. • No consideration has been made to by-products.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A cut-off of 0.5g/t was chosen. • The adopted cut-off grades were based on assumptions of potential open pit mining & milling costs. • The project could be amenable to trucking to a mill.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• It is assumed the lodes would be mined using typical Eastern Goldfields open pit methodologies. • Further work, including additional drilling, will determine the optimal mining method for this material.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• The South Castlereagh Deposit is located 500m south, in similar rock types and mineralisation styles, of the Castlereagh Open Pit excavated by Excelsior Gold Ltd in 2015. The gold recoveries from Castlereagh Open Pit through the Paddington Mill owned by Norton Goldfields/Zijin exceeded 92%. • No metallurgical testwork has been completed on mineralisation at South Castlereagh.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• No milling operation scenario has been proposed, however very large gold mining operations exist only 15 kilometres from these prospects and local and regional environmental impacts have been manageable. It is likely that a similar scenario would exist with the project. • At this stage, there is no environmental impact study completed at South Castlereagh.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• A total of 78 determinations have been made from two new (2019) DD holes. • Determinations were made using Archimedes method on typically fresh to slightly weather rock. • In total 35 measurements were taken from within the mineralised domains on fresh to slightly weather rock. This resulted in average fresh ore densities between 2.74 and 2.90 depending on the domain. The weighting of samples per domain resulted in 2.85 being adopted in the resource model. • Oxide, supergene and transitional ore densities used were 1.8 kg/m3, 2.2 kg/m3 and 2.5 kg/m3 respectively • On balance BDC believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density.

Criteria	JORC Code explanation	Commentary
		BDC have used assumed bulk density values for ore and waste based on the interpreted weathering surfaces.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified in part as Indicated and Inferred on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. • In part, the lodes have been drilled on 15-25m x 15-25m spacing, on northing and easting, with drill lines running approximately E-W. To the north and south drilling is at greater spacing. • In part, the deposit is adequately drilled to have potentially been defined as higher confidence classification using only drilling density as a criteria. However, a number of issues remain unresolved with the base data and geological/structural models, including; • Rock density (35 samples) is limited to typically fresh material from 3 domains. Rock density for the oxide/supergene/transitional zones is assumed – no actual mineralised zone measurements exist from South Castlereagh for these zones. • Only two diamond core holes have been drilled at depth in the resource – further core holes are required to confirm geological and structural interpretation assumptions.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 30 September 2019 ASX:BDC 'Bardoc Gold Resource Hits +3Moz underpinning mining studies and next phase of growth' The competent person has reviewed this work.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource Estimates is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • The statement relates to global estimates of tonnes and grade.

JORC Table 1 Checklist of Assessment and Reporting Criteria – MULWARRIE

Section 1 Sampling techniques and data – Mulwarrie

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation thatare Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems.* • *Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The Mulwarrie Gold drill sample data has been collected by various exploration companies between 1983 and 1996 Drilling programs included Rotary Air Blast (RAB), and Reverse Circulation (RC) drilling techniques, the current historical database includes 453 holes for a total of 14,321m drilling and 7010 assay samples. • Collar details and mineralized drill intercepts are in the process of being verified. • The historical drilling programs were completed by Pancontinental between 1983 and 1988. • Several small subsequent drilling campaigns were undertaken by between 1989 and 1996. • The spacing of drill hole collars is variable. The gold mineralisation has generally been defined by drill holes on a cross- section line spacing, roughly perpendicular to the strike of the mineralised zones between 10 m and 25 m apart. • The June 2017 drill program completed by Spitfire Materials Limited(SPI) totaled 24 RC holes for 2915m and 1 Diamond drill hole of 99.6m. • The August 2017 drilling program by SPI totaled 24 RC holes for 2780m • The November- December 2017 drilling program by SPI totaled 27 RC holes for 3517m • Drill holes were oriented to return the best intersections of the mineralization, on a local grid northing of 323 degrees. Most of the drill holes were oriented roughly perpendicular to strike. • The Reverse Circulation (RC) percussion drilling was generally carried out by a T64 Schramm which used a nominal 5.25 inch RC bit

Criteria	JORC Code explanation	Commentary
		• diameter. • The recent RC drilling program was completed using a 685 Schramm with additional auxiliary & booster compressors using a 5.75 inch face sampling hammer. • The recent diamond hole was completed using a McCulloch DR800. • RAB drilling was carried out, but there are no details of the type of rig or bit size used.
Sub-sampling techniques and sample preparation	• *Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	• Drilling programs at Mulwarrie included Rotary Air Blast (RAB), and Reverse Circulation (RC) drilling techniques. • Hole depths range from 3m to 205m. • RAB drilling makes up 50.7% and RC drilling makes up 49.3% of the historical exploration drilling completed at Mulwarrie. • Several campaigns of drilling were undertaken by the historical companies, between 1983 and 1996. • Company drilling rigs and professional drilling contractors were used by the historical exploration companies. • The recent diamond hole was drilled HQ to 70.7m & the remainder NQ2 to 99.6m. All core was orientated from 17MWDD001. • The June and August 2017 RC drilling was completed using a face sampling hammer with 5.75 inch bit.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• For RAB and RC drilling, the overall recoveries are assumed to be adequate. • Minor sample recovery problems were noted in the historical reports when drilling encountered faulted/fractured ground. No sample recovery problems were encountered with the recent diamond & RC drilling. • The results discussed herein are exploration results only, and no allowance is made for recovery losses that may impact future • mining.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• The geological logging was appropriate for the style of drilling and the lithology's encountered. • Geological logs are available for most holes. However, logging was often rudimentary and some logs were not recorded or not included in the reports. Detailed logs were recorded for the recent diamond & RC drilling. • Logging is qualitative, with the exception of some quantitative logging of sulphide, quartz veining and alteration content. Percent sulphide & quartz veining was recorded for the recent drilling. • Drill hole logging data was entered into the Mulwarrie database directly from historical drilling reports and assay reports. Hard copy logs were entered by hand for the recent drilling. • No geotechnical logs are available for the historical drilling. Geotechnical logging was completed on diamond hole • 17MWDD001.
Subsampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All one-metre intervals are collected via a cone splitter directly attached to the cyclone when dry. All samples were dry. Individual samples were approximate 3.5kg. The bulk residue was collected via plastic drums and laid out in order on the drill pad. • Individual meter samples were submitted to the laboratory. Four meter composites were collected for the remainder of the drill holes and also submitted. • The sample collection, splitting and sampling for this style of drilling is standard industry practise and fit for purpose. • Core was cut with quarter and half core sampled with a maximum sample length being 100cm and a minimum length being 30cm. From the core drilling, only zones considered prospective for gold have been sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• All samples for Spitfire's drill programs were assayed by Fire Assay with AAS finish for Au. • The majority of the samples have been prepared and assayed by industry standard techniques for gold deposits using well established laboratory services (NAGROM). • Recent checking of fire assays by bulk Leachwell and screen fire methods to guard against the possible presence of coarse free gold grains and to investigate refractory character of mineralization. • No geophysical tools, spectrometers or handheld XRF's were used. • Field duplicates were submitted every 20th sample, as well as blind reference standards for Spitfire's drilling
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• One diamond hole 17MWDD001 has recently been completed to twin historical RC hole MWRC628 to verify sampling and assaying. Historical RC holes MWRC604 & MWRC630 have also been twinned in the recent RC drilling program.

Criteria	JORC Code explanation	Commentary
		• The CP for Spitfire has visited the Mulwarrie Gold Project in the field and confirmed the location of most drill collars and areas of historical gold mining with a DGPS. • The drill sample assay data has been captured by Spitfire and entered into a new Microsoft Access database.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Downhole survey measurements were collected for some of the historical RC holes using a single shot downhole survey tool. For many of the shallow holes, only one top of hole survey was completed at the collar position, noting the azimuth and dip at the start of the hole. North seeking gyro down hole surveys were completed for the recent RC drilling. • The Mulwarrie Gold project drill holes were drilled on a local grid, sub-parallel to strike (orientated at 323 degrees magnetic). Most drill hole collars were surveyed using a standard GPS and later checked with a differential GPS. • The co-ordinate system is zone 51, GDA94 datum. Drill collars are believed to be accurate. • All available drill collar locations were checked in the field with a DGPS, and found to be within 0.2m for existing easting and northing MGA94 coordinates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The spacing of the drill hole collars is variable. The gold mineralisation at the Mulwarrie Gold Project has generally been defined by drill holes on a cross section line spacing, roughly perpendicular to the strike of the mineralised zones at 15m,20m, 25m and 50m, with an average on-section spacing of 10m to 15m. • RC sampling, in general, was collected on 1m intervals down hole in mineralised zones including the recent program. Some alternate 1m samples were collected in non mineralised footwall and hanging wall lithologies in historical holes. 3m composites were collected in non mineralised lithologies in the recent RC drilling. • RAB sampling was collected on a combination of 1m, 2m, 3m and 4m composites in mineralised zones. Some alternate 2m, 3m and 4m compositing was carries out in non mineralised footwall and hanging wall lithologies. • The drill density is sufficient to estimate a Mineral Resource.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Exploration drilling is generally perpendicular to mineralized bodies or shear zone. • No orientation based sampling bias has been identified in the data at this point.
Sample security	• *The measures taken to ensure sample security.*	• No chain of custody was documented by the historical companies. • The chain of custody is assumed to be as per industry best practice for the time.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• A review of the historical sampling techniques is not possible. • There has been no external audit or review of the database compiled by Goldfield Argonaut or processes to estimate the Exploration Target.

Section 2 Reporting of Exploration Results Mulwarrie

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Mulwarrie Gold Project is secured by 2 granted mining tenements M30/119 and M30/145 (totaling 180 Ha). • All tenements are in good standing
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• A summary of previous exploration at Mulwarrie Gold Project is included below; • The Mulwarrie District, including the Mulwarrie Project area has a recorded production of 26,344 ounces of gold from 19,728 tonnes for an average grade of • 41.53 g/t Au (1903-1910). • 1983 -1988 – Pancontinental Mining Limited completed gridding, geological mapping, aeromagnetic and ground surveys, IP surveys, regional soil sampling, costeaning, RAB and RC drilling. • Callion, a subsidiary of the German based corporation, Thyssen Schachtbau • GMBH (TSG) commenced mining at Mulwarrie Central West in November 1989, with New Holland Mining N.L. (20% interest) and H.F.

Criteria	JORC Code explanation	Commentary
		Reif (6.25% interest). A total of 24,344 tonnes @ 3.88 g/t for 94.5 kg (3,037 ounces) of gold was recovered. • In 1995 Consolidated Minerals had secured the tenements and in 1996 completed 34 RC holes (MWRC 601-634) for a total of 2,977 metres and to a maximum depth of 126 metres. • Post 1997 and up to the date that Ethan Minerals Ltd signed option • agreements with Reif and Hoppmann the latter parties carried out their own exploration programs within the Mulwarrie tenements. This work consisted of RC drilling, reconnaissance prospecting and loam sampling. • In 1998 Reif and Hoppmann carried out an RC drilling program of 8 drill holes. MWRC 635 – MWRC 642 which was focused directly south of the Central Pit between 9590 North and 9620 North. The individual assay results from this • program cannot be located in available reports.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Mulwarrie Gold Project lies within a 10km wide greenstone belt which forms the northwest extension of the Coolgardie Line. The structurally dominant north trending Mt. Ida fault lies approximately 4km east of the Mulwarrie Mining Centre. Most of the lithologies within this greenstone belt are steeply dipping and well foliated along a NNW/SSE trend. • Gold mineralisation at Mulwarrie is associated with flat to steep dipping quartz reefs with strong diopside, biotite, epidote and carbonate alteration haloes. Pyrrhotite and pyrite development is also strong within and adjacent to the quartz reefs. Minor amounts of chalcopyrite, galena and sphalerite are also associated with gold mineralisation. Gold is found within quartz reefs, within biotite selvages to the quartz veins and also in sheared & altered country rocks. • Benson (1996) interpreted the mineralised zones as being lens shaped pods and as being structurally and stratigraphically controlled with the zones commonly occurring at felsic/mafic contacts, within shear zones and at metabasalt metadolerite contacts.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced* • *Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• No exploration results are presented
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or*	• No exploration results are presented

Criteria	JORC Code explanation	Commentary
	widths should be practiced to avoid misleading reporting of Exploration Results.	
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources Mulwarrie

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The historical database was compiled and supplied to Spitfire as a Microsoft Access database. • The data have then been imported into a relational SQL Server database using DataShed™ (industry standard drill hole database management software). • Subsequent drilling data has been supplied in Excel templates, using drop down lists to verify codes before it is imported to the SQL database. • The data are constantly audited and any discrepancies checked by Spitfire • personnel and its consultants before being updated in the database. • Normal data validation checks were completed on import to the SQL database. • Historical data have not been checked back to hard copy results, but have been checked against previous databases supplied and results compared against new Spitefire infill drilling. • All logs are supplied as Excel spreadsheets files and any discrepancies checked and • corrected by field personnel.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation is considered reasonable. Gold is found within quartz reefs, within biotite selvages to the quartz veins and also in sheared & altered country rocks. These quartz veins and shears have been modelled in 3-D using Leapfrog™ and Surpac™ software. • The geological interpretation is supported by drill hole logging, assays and mineralogical studies completed historically and infilled/extended by Spitfire in 2017. Pit mapping and investigation of historical workings also support the model. • No alternative interpretations have been considered at this stage. • Grade wireframes correlate well with the logged quartz veins. • The key factor affecting continuity is the presence of quartz and shear fabrics.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The main modelled mineralized domains have a total dimension of 1,000m (north- south), ranging between less than a metre to multiple metres over up to 150m (east-west) in multiple veins and ranging between 300m and 500m RL (AMSL).
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• Grade estimation using Ordinary Kriging (OK) was completed using Geovia Surpac™ software for Au. • Drill spacing typically ranges from 10-15m to 50m with some limited zones to 100m. • Drill hole samples were flagged with wire framed domain codes. Sample data was composited Au to 1m using a best fit method. Since all holes were typically sampled on 1m intervals, there were only a very small number of residuals in the diamond core holes that were sampled to geological contacts. • Influences of extreme sample distribution outliers were reduced by top-cutting on a domain basis. Top-cuts were decided by using a combination of methods including grade histograms, log probability plots and statistical tools. Based on this statistical analysis of the data population, top-cuts were applied for Au to 17 of the 21

Criteria	JORC Code explanation	Commentary
	• *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• domains. Some domains did not require top-cutting. • Directional variograms were modelled by domain using traditional variograms. Nugget values are moderate to high (between 40% and 50%) and structure ranges up to 150-200m. Domains with more limited samples used variography of geologically similar, adjacent domains. • Block model was constructed with parent blocks of 1m (E) by 5m (N) by 5m (RL) and sub-blocked to 0.25m (E) by 1.25m (N) by 1.25m (RL). All estimation was completed to the parent cell size. • Three estimation passes were used. The first pass had a limit of 15m, the second pass 30m and the third pass searching a large distance to fill the blocks within the wire framed zones. Each pass used a maximum of 10 samples, a minimum of 5 samples and maximum per hole of 3 samples. • Search ellipse sizes were based primarily on a combination of the variography and the trends of the wire framed mineralized zones. Hard boundaries were applied between all estimation domains. • Validation of the block model included a volumetric comparison of the resource wireframes to the block model volumes. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting, northing and elevation. Visual comparisons of input composite grades vs. block model grades were also completed.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnes have been estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Quartz veins typically coincide with anomalous Au which allows for geological continuity of the mineralised zones. The quartz vein (and grade) contact models were built in Leapfrog™ Geo software and exported for use as domain boundaries • for the block model.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Based on the orientations, thicknesses and depths to which the gold-bearing veins have been modelled, plus their estimated grades, the potential mining method is considered to be open pit mining with the possibility of selective underground mining on higher-grade veins.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Metallurgical tests of selected RC samples including bottle roll cyanidation leach tests and rate of cyanidation tests were completed by Ammtec in 1986 and 1987 for Pancontinental. More recently bottle roll cyanidation leach tests prior to trial mining using a mobile gravity/CIL plant were also carried out by Goldfield Argonaut in 2015. Petrological examination of selected samples was also completed at the end of trial mining. • One composite was created from sulphidic quartz lode ore (semi massive pyrite & pyrrhotite in quartz), the other composite was created from biotite altered & sheared basalt containing disseminated pyrite & pyrrhotite also derived from ore grade RC samples collected from East Lode intercepts. Labelled sulphide composite in the Nagrom report. A standard grind size was used of P80 (0.106mm). Initial test work has produced encouraging results and indicates that both the quartz lode & altered basalt ore is not refractory in nature. 24-hour bottle roll tests returned 96.6% recovery from the quartz lode composite and 91% recovery from the sulphide bearing altered basalt composite.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Appropriate environmental studies and sterilisation drilling will be planned as part of any future feasibility study programs.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	• No density measurements were reported by the historical exploration companies. • Spitfire had a selection of 7 core samples from the only core hole (17MWDD001) analysed by hydrostatic weighing on uncoated HQ core samples to determine bulk density factors. Of these, two were

Criteria	JORC Code explanation	Commentary
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	quartz lode samples with associated sulphide minerals and had results of 2.87 and 3.12. • Spitfire has chosen to use 2.8 for the bulk density to account for the increased sulphide content of the vein hosting the gold (compared to quartz of 2.65) but more conservative that the abovementioned limited core analysis results.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density and pit mapping information, confidence in the underlying database. In particular, the lack of oriented and structurally logged diamond core holes and bulk density information is noted. • All factors considered, the resource estimate has been assigned to the Inferred category until further diamond core drilling and structural analysis confirms the geological/structural model constructed for the resource. • In addition, considering the already close spacing of the RC drilling, alongside additional diamond core holes, further bulk density data would support potential future re-classification to Indicated and possibly Measured Resources.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 30 September 2018 ASX:SPI '2.6Moz Consolidated JORC Resource for Bardoc Gold Project sets strong foundation for new Australian gold development' The competent person has reviewed this work..
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code. • The statement relates to global estimates of tonnes and grade.

North Kanowna Star Mineral Resource Estimate – JORC Table 1
JORC Table 1 Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Drill holes used in the estimate include 5 diamond holes ("DD") and 196 reverse circulation ("RC") holes. In addition, large number of regional Rotary Air Blast ("RAB") and air-core ("AC") holes have been completed; • The mineralization was primarily sampled by Reverse Circulation (RC)majority of RC and DD drilling on nominal 40m x 20m (N x E) grid spacing. The was completed between 1985 and 2014 by various companies. SPM completed 58 holes in 2014; • In the deposit area, holes were generally drilled towards magnetic 090 degrees • at varying anglesangled to optimally intersect the mineralizedmineralised zones.; • Complete details are un-available for historic drilling. • BDC RC chip samples were collected and passed through a cone splitter in in 1m or 2m intervals. from a rig mounted cyclone and riffle splitter; • Limited numbers of field duplicates and screen fire assays have been undertaken to support sample representivity. • All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential additional assay at a later dateFor SPM RC drilling, samples were composited into 4m intervals for assay with anomalous intervals resubmitted at 1m intervals. The majority of RC holes were sampled and assayed at 1m intervals;

Criteria	JORC Code explanation	Commentary
		• DD core was cut using a diamond saw and half core samples submitted for analysis
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• RAB drilling makes up about 20% of the historic drilling and RC the other 80%. There are several campaigns of historic drilling between 1984 and 1999. These holes are sometimes without documentation of the rig type and capability, core size, sample selection and handling. There is 1 historic diamond core hole, the core has not been located as it has been removed from site. • For (post 2009) BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bitThe majority of RC drilling used a face sampling bit but records were not available for some of the historic drilling; • Diamond drilling was carried out with HQ and NQ sized equipment with standard tube;
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• All BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilized for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database. • BDC RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample. • Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction. Recoveries from SPM drilling were good with RC samples visually monitored; • Diamond core recovery was recorded in the drill logs and was excellent; • There is no identified relationship between sample recovery and sample grades.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All diamond drill holes were logged for recovery, RQD, geology and structure; • RC drilling was logged for various geological attributes; • All drill holes were logged in full.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• RC samples were collected from a rig mounted cyclone and or free standing splitter in one metre intervals; • For historic RC and DD drill programs, samples were assayed at contract laboratories using fire assay or aqua regia analysis. SPM samples were assayed at the Aurum laboratory in Perth. Samples were dried and a 1kg split was pulverized to 80% passing 75 microns; • SPM drilling included QAQC protocols including blanks, standards and duplicates. Results were satisfactory and supported the use of the data in resource estimation; • No QAQC reports have been located for the historic drilling data; • Sample sizes are considered appropriate to correctly represent the gold mineralisation based on: the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and assay value ranges for Au.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• For SPM drilling, analysis was by fire assay and atomic absorption spectrometry (AAS) finish at the Aurum laboratory in Perth; • For historic RC and DD drilling, analytical procedures are not known; • The analytical technique used by SPM approaches total dissolution of gold in most circumstances; • SPM drilling included QAQC protocols including blanks, standards and duplicates. Results were satisfactory and supported the use of the data in resource estimation.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No independent verification of significant intersections has been carried out; • Multiple phases of drilling have confirmed the overall tenor and distribution of mineralisation; • Primary data documentation for recent drilling is electronic with appropriate verification and validation; • Historic data was compiled from company and WAMEX reports;

Criteria	JORC Code explanation	Commentary
		• Assay values that were below detection limit were adjusted to equal half of the detection limit value.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Drill hole collar coordinates used MGA transforms from a local grid; • Drill hole collars have been surveyed either by licensed surveyors or using differential or hand held GPS; • Topographic control is from drill hole collar surveys.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• For RC and DD drilling, the hole spacing is largely 25m by 20m, with some infill to 10m spacings; • The drilling has demonstrated sufficient continuity in both geological and grade continuity to support the definition of Mineral Resource, and the classifications applied under the 2012 JORC Code; • Samples used in the Mineral Resource were based largely on 1m or 2m samples with all samples composited to 2m for estimation.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Holes were generally angled at -60o to 250o to optimize the intersection angle with the interpreted structures; • No orientation based sampling bias has been identified in the data.
Sample security	• *The measures taken to ensure sample security.*	• SPM samples were carefully identified and bagged on site for collection and transport by commercial or laboratory transport.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of sampling techniques were located; • The majority of work was carried out by reputable companies using industry standard methods.

Section 2 Reporting of Exploration Results – North Kanowna Star

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• M27/102 which is owned by Strategic Projects Mining Pty Ltd.; • The project also includes 4 Prospecting Licences P27/2369- 2371 which were granted for a term of 4 years and expire on 3 February 2023- these tenements are in their first year and in good standing • M27/102 was granted for a term of 21 years and expires on 21 May 2031; • Tenements M27/102 & M27/140 will be subject to a Royalty of $15 per ounce for the first 50,000oz mined on completion of the acquisition by Bardoc. In addition a royalty of $1.00 per tonne mined is payable to Melvin Dalla Costa. • M27/102 is currently subject to a Forfeiture Notice for non-compliance with rent requirement, a fine is payable.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The tenement was previously held by various companies. The majority of drilling was completed by previous operators since 1985; • The project was acquired by SPM in 2013. SPM completed 58 RC drill holes in 2014.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The main prospect is Wedge-Perseverance which comprises multiple parallel zones of mineralisation within a corridor approximately 600m long hosted within mafic volcanic and felsic lithologies. The prospect forms a flexure trending NNE at the south, through to NNW at the north of the prospect. • Gold mineralisation in the area occurs within an east dipping quartz vein set and is mainly hosted by the felsic lithologies near the sheared contacts with the mafic rock types. • Weathering extends to a depth of 50m to 75m below surface and mineralisation is typically depleted for 15m to 20m below surface

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are presented

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	• No exploration results are presented

Criteria	JORC Code explanation	Commentary
	• *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources – North Kanowna Star

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data from historic drilling was compiled from company and WAMEX reports. • Data from SPM drilling captured electronically to prevent transcription errors; • Validation included re-survey of selected holes and comparison to historic reports.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation is considered to be reasonable, although mineralised structures are not always well defined by drilling; • The deposit consists of moderate dipping mineralised zones which have been interpreted based on assay data from samples taken at regular intervals from angled drill holes; • It is likely that a degree of enrichment has occurred in the oxidised portions of the deposit.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The NKS Mineral Resource area extends over a strike length of 600m and includes the 85m vertical interval from 350mRL to 265mRL.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• Using parameters based on deposit geometry and drill hole spacing, Inverse distance squared ("ID2") interpolation was used to estimate average block grades within the deposit; • Surpac software was used for the estimation. • A high grade cut of 11g/t was applied to 2m composite data; • The parent block dimensions used were 10m NS by 5m EW by 5m vertical with sub-cells of 2.5m by 1.25m by 1.25m. The parent block size is just less than 50% of the average drill hole spacing in the well drilled part of the deposit.; • No previous resource estimates have been completed; • No assumptions have been made regarding recovery of by-products; • No estimation of deleterious elements was carried out. Only Au was interpolated into the block model;

Criteria	JORC Code explanation	Commentary
	• *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• An orientated ellipsoid search was used toDirectional variograms were modelled by domain using traditional variograms. Nugget values are moderate to high (around 40%) and structure ranges up to 70m. The variograms were poorly formed and with D1 containing the most samples, its modelled variography was applied to the remainder of the domains select data and was based on deposit geometry and hole spacing; • An initial interpolation pass was used with a maximum range of 40m which filled 67% of blocks. A second pass radius of 80m filled the remainder of the blocks; • A minimum of 10 samples and a maximum of 40 samples was used for both passes; • Selective mining units were not modelled in the Mineral Resource model. The block size used in the model was based on drill sample spacing and lode orientation; • Only Au assay data was available, therefore correlation analysis was not possible; • The deposit mineralisation was constrained by wireframes constructed using a 0.4g/t Au cut-off grade in association with logged geology; • The wireframes were applied as hard boundaries in the estimate; • For validation, trend analysis was completed by comparing the interpolated blocks to the sample composite data within 20m easting intervals and by 10m vertical intervals.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The Mineral Resource has been reported at a 0.5g/t Au cut-off based on assumptions about economic cut-off grades for open pit mining.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Portions of the deposit are considered to have sufficient grade and continuity to be considered for open pit mining; • No mining parameters or modifying factors have been applied to the Mineral Resource.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• No metallurgical test-work was undertaken; • The largely oxide nature of the mineralisation suggests that metallurgical characteristics should be satisfactory for conventional processing however test work is required to confirm this.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• The area is not known to be environmentally sensitive and there is no reason to think that approvals for development including the dumping of waste would not be approved.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density determinations were not available; • Assumed bulk density values used in the resource were 1.8t/m3, 2.2t/m3 and 2.7t/m3 for oxide, transitional and fresh mineralisation respectively.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). The Mineral Resource was classified as Indicated and Inferred Mineral Resource on the basis of data quality, sample spacing, and lode continuity; • The portion of the resource defined by the 25m by 10m spaced drilling, and where continuity of mineralisation was reasonable was classified as Indicated Mineral Resource;

Criteria	JORC Code explanation	Commentary
		• The remaining portions of the deposit were classified as Inferred Mineral Resource due to poor grade continuity or sparse drilling; • The Mineral Resource estimate appropriately reflects the view of the Competent Person.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 9 September 2019 ASX:BDC 'Acquisition of 111,600oz JORC gold resource further strengthens growth pipeline at 2.6Moz Bardoc Project' The competent person has reviewed this work.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The NKS Mineral Resource estimate is reported with a degree of confidence that is reflected in the classification; • The Mineral Resource statement relates to global estimates of tonnes and grade; • The deposit is not currently being mined.

JORC , 2012 Edition – Tables – NERRIN NERRIN
Section 1 Sampling techniques and data – Nerrin Nerrin

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The mineralization was primarily sampled by Reverse Circulation (RC) drilling on nominal 40m x 20m (N x E) grid spacing. The holes were generally drilled towards magnetic 090 degrees • at varying angles to optimally intersect the mineralized zones. • Complete details are un-available for historic drilling. • BDC RC chip samples were collected and passed through a cone splitter in 1m intervals. • Limited numbers of field duplicates and screen fire assays have been undertaken to support sample representivity. • All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential additional assay at a later date
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• RAB drilling makes up about 20% of the historic drilling and RC the other 80%. There are several campaigns of historic drilling between 1984 and 1999. These holes are sometimes without documentation of the rig type and capability, core size, sample selection and handling. There is 1 historic diamond core hole, the core has not been located as it has been removed from site. • For (post 2009) BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• All BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilized for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database. • BDC RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample. • Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction.

Criteria	JORC Code explanation	Commentary
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All BDC RC samples are geologically logged directly into hand-held Geobank devices. • Whilst logging geologists record weathering, alteration minerals and intensity, host rock, mineralisation amongst other things for every metre. • The entire lengths of BDC RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All BDC RC samples are put through a cone splitter and the sub sample is collected in a unique pre-numbered calico sample bag. The moisture content and volume recovered of each sample is recorded in the database. • The BDC RC samples are sorted, oven dried, the entire sample is pulverized in a one stage process to 85% passing 75 µm. The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge. • BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. BDC inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser. • In the field every 10th metre from cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. • The sample sizes are considered to be appropriate for the type, style, thickness, grain size and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been Intertek Genalysis and Bureau Veritas Australia. No complete details of the sample preparation, analysis or security are available for either the historic RAB, AC, DD or RC drilling results in the database. • The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 40g or 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine. • The QC procedures are industry best practice. The laboratories are accredited and use their own certified reference materials. • BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures BDC examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• BDC's Exploration Manager and Senior Resource Geologist have inspected RC chips and drill core in the field to verify the correlation of mineralized zones between assay results and lithology/alteration/mineralization. • A number of RC holes have also been drilled that confirmed results obtained from historical drillholes. No holes have been directly twinned, there are however holes within 15m of each other. • Primary data is sent digitally every 2-3 days from the field to BDC's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that

Criteria	JORC Code explanation	Commentary
		are required are recorded permanently in the database. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control.*	• All drill holes have their collar location recorded from a differential RTK GPS unit by consultant surveyors. Downhole surveys are completed every 30m downhole during drilling and 5m intervals after end of hole. Incomplete down hole surveying information is available for the historic RC or DD drilling. • BDC routinely contracted down hole surveys during the programmes of exploration drilling for each drill hole completed using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications. The current drill program was downhole surveyed by the drill contractor using north seeking gyro. • All drill holes and resource estimation use the MGA94, Zone 51 grid system. • The topographic data used was obtained from a LIDAR survey flown in 2012 and it is adequate for the reporting of Exploration Results and subsequent Mineral Resource Estimates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	• The nominal exploration drill spacing is 40m x 20m with many E-W cross-sections in-filled to 15m across strike. • The drill spacing, spatial distribution and quality of assay results is appropriate for the nature and style of mineralisation being reported in the Mineral Resource Estimate. • The majority of RC holes were sampled at 1m, but when this isn't the case, sample compositing to 4m has been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of previous drilling is to grid east (89 degrees magnetic). The bulk of the mineralized zones are perpendicular to this drilling direction. The BDC drilling is oriented towards similar angles in order to intersect the mineralisation in the optimal direction. • No relationship between drilling orientation and sampling bias is recognised at this time.
Sample security	• *The measures taken to ensure sample security.*	• RC samples are delivered directly from the field to the Kalgoorlie laboratory by BDC personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an BDC generated sample submission list and reports back any discrepancies
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An internal review of sampling techniques and procedures was completed in March 2018. No external or third party audits or reviews have been completed.

Section 2 Reporting of Exploration Results – Nerrin Nerrin

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Nerrin Nerrin prospect is granted Mining Tenements held by GPM Resources Pty Ltd, a wholly owned subsidiary of Bardoc Gold Limited. • At this time the tenements are believed to be in good standing..
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and is used as a guide to BDC's exploration activities. This includes work by Goldfields, Samantha, Julia Mines and other exploration companies. Previous parties have completed historic and underground mining, geophysical data collection and interpretation, soil sampling and drilling. • The historical RC and DC data is suitable for use in a Mineral Resource Estimate.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The lithologies encountered in the area comprise micaceous shale and gritty siltstones. East of the shale is a heavily weathered dolerite body which is narrow to the south and widens considerably to the north. Moderate milky quartz veining is present within the lithology. The eastern contact between dolerite and ultramafics is intensely sheared. Most of the mineralisation is within the Zoroastrian Dolerite. The mineralisation is similar to that seen at Zoroastrian with a north-south trending shear zone with minor arsenopyrite.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*	• No exploration results are presented

Tenement	Holder	Area (Ha)	Expiry Date
M24/348	GPM Resources	610.5	10/01/2032
M24/532	GPM Resources	9.69	20/05/2020

Criteria	JORC Code explanation	Commentary
	○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are presented
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are presented
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are presented
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are presented
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources – Nerrin Nerrin

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the system and the gold distribution is modelled as a set of sub-parallel, N-S striking, steeply dipping narrow lodes. • The continuity of mineralisation and volume controls are reasonably well established where drilling is at a nominal 20-25m (E) by 20-25m (N) hole spacing. • The use of historical drilling provides a level of uncertainty as the company cannot validate all the QAQC data and downhole survey data.

Criteria	JORC Code explanation	Commentary
		• The selection of mineralised domains has used geological factors such as geological contacts, logged quartz and sulphides in conjunction with a 0.3g/t cut-off for the underground model. Gold values transition from background to ore grades over a very short distance.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.* •	• The mineralised corridor extends 600m north/south, up to 35m east/west (in multiple narrow lodes) and up to 180m vertically. • Mineralised structures are present at surface for some lodes.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• BDC has used 3DM wireframes interpreted on a sectional basis to constrain the mineralised zones, based on RC drilling at spacing's down to 20m N x 20m E-W. • 1m compositing was considered appropriate for the estimation given the sometimes narrow nature of the steep lodes. 1m composite intervals falling within the wire framed estimation domains were coded in the database. • Influences of extreme sample distribution outliers were reduced by top-cutting on a domain basis. Top-cuts were decided by using a combination of methods including grade histograms, log probability plots and statistical tools plus visual inspection of the spatial location of outlier values. Based on this statistical analysis of the data population some top cuts were applied, including domains D1 and D8 (20 ppm) and D5, 6 10 and 12 (10 ppm). • Grade estimation using Ordinary Kriging (OK) was completed using Geovia Surpac™ software for Au only. • Directional variograms were modelled by domain using traditional variograms. Nugget values are moderate to high (around 40%) and structure ranges up to 70m. The variograms were poorly formed and with D1 containing the most samples, its modelled variography was applied to the remainder of the domains. • Block model was constructed with parent blocks of 2m (E) by 10m (N) by 10m (RL) and sub-blocked down to 0.5m (E) by 2.5m (N) by 2.5m (RL). All estimation was completed to the parent cell size. Discretisation was set to 5 by 5 by 2 for all domains. • Three estimation passes were used with the first pass using a limit of 30m, the second pass 60m and the third pass searching a large distance to fill the blocks within the wire framed zones. Each pass used a maximum of 12 samples, a minimum of 6 samples and maximum per hole of 3 samples. • Search ellipse sizes were based primarily on a combination of the variography and the trends of the wire framed mineralized zones. Hard boundaries were applied between all estimation domains. • Validation of the block model included a volumetric comparison of the resource wireframes to the block model volumes. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting, northing and elevation. Visual comparisons of input composite grades vs. block model grades were also completed. • No consideration has been made to by-products.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A cut-off of 0.5g/t was chosen. • The adopted cut-off grades were based on assumptions of potential open pit mining & milling costs. • The project could be amenable to trucking to a mill.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• It is assumed the lodes would be mined using typical Eastern Goldfields open pit methodologies. • Further work, including additional drilling, will determine the optimal mining method for this material.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• No metallurgical assumptions have been built into the resource models. • There has been no metallurgical testwork completed on mineralisation at Nerrin Nerrin. • The mineralisation is within the Zoroastrian Dolerite and is similar to that seen at Zoroastrian. Recent mining at Zoroastrian by EXG produced recoveries of 92% in fresh material.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to*	• No milling operation scenario has been proposed, however very large gold mining operations exist only 15 kilometres from these prospects and local and regional environmental impacts have been

Criteria	JORC Code explanation	Commentary
	consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	manageable. It is likely that a similar scenario would exist with the project. • At this stage, there is no environmental impact study completed at Nerrin Nerrin.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Rock density is assumed – no actual measurements exist from Nerrin Nerrin. • The following bulk densities have been assumed from nearby comparable operations: o Oxide: 1.8 o Supergene: 2.2 o Transition: 2.5 o Fresh: 2.7
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. • In part, the lodes have been drilled on 20-25m x 20-25m spacing, on northing and easting, with drill lines running approximately E-W. To the north and south drilling is at greater spacing. • In part, the deposit is adequately drilled to have potentially been defined as higher confidence classification using only drilling density as a criteria. However, a number of issues remain unresolved with the base data and geological/structural models, including; • Rock density is assumed – no actual measurements exist from Nerrin Nerrin. • Only 1 diamond core hole has been drilled at depth in the northern part of the resource – further core holes are required to confirm geological and structural interpretation assumptions.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 30 September 2019 ASX:BDC 'Bardoc Gold Resource Hits +3Moz underpinning mining studies and next phase of growth' The competent person has reviewed this work.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource Estimates is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. • The statement relates to global estimates of tonnes and grade.

JORC Table 1 Checklist of Assessment and Reporting Criteria – LOCHINVAR
Section 1 Sampling techniques and data – Lochinvar

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more*	• The mineralization was sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on variable drilling spacing. The sampling, collection and sub-setting methods are at or above Industry Standard Practise (explained further below). The holes were drilled to optimally intersect the targeted mineralized zones. The majority of holes were drilled with a dip of -60° with azimuths of either 90° or 270° magnetic. It is noted that drilling has failed to adequately test for potential cross cutting structures that may or may not influence gold distribution. • The drill hole locations are considered sufficient to provide for the spatial spread of samples across multiple mineralized zones and different rock types. All EXG RC samples were collected and passed through a cone splitter. Diamond core was HQ or NQ2 in size and drilled with a dip of -60° with azimuths of either 90° or 270° magnetic. Holes positions were surveyed by a qualified surveyor and holes

Criteria	JORC Code explanation	Commentary
	explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	were down hole surveyed by contractors. Instruments used were No records exist for how the diamond core drilled was collected, handled or sampled • All RC drilling by EXG was collected on one metre down hole intervals. The recovered samples were passed through a cone and/or a riffle splitter to collect a nominal 2.5kg – 3.5kg sample before having a 50g fire assay. Historic sampling had every 2nd metre submitted for assay and samples either side submitted if anomalous results were returned from the initial sampling. The sample was then prepared by standard fire assay techniques with a 20 to 50g charge. DC was geologically logged and sampled to lithological contacts or changes in the nature of mineralisation. Maximum length was 1m with a minimum sample length of 0.25m, half core was sampled. Assays from EXG drilling used 50g Fire Assay. Selected drill holes had pieces of core from ore and waste zones tested for their SG by the weight in water and weight in air method.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• All This resource is based on information collected from either RC or DC drilling. No RAB or open hole percussion holes were included in grade estimations. The RC drilling system employed by EXG uses a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter). All drill core is orientated by the drilling contractor with a down the hole Ace system. Historical drilling is similar to that described above, limited core orientation data collected.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• All RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilised for the collection of field duplicate samples. The weight of the sample in the plastic bag is recorded and the total sample recovery can be calculated. All samples received by the laboratory are weighed with the data collected and stored in the database. The DC samples are orientated; length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained. Limited historical information is available on sampling recoveries and QAQC methods within the historical reports reviewed. However, given the companies involved (Goldfields, Placer Dome), and that the drilling was conducted between 1995 and 2006 it is considered that the work undertaken is of sufficient quality to estimate JORC resources. • RC samples are visually logged for moisture content, sample recovery and contamination. This information is stored in the database. The RC drill system utilises industry standard face sampling hammers with a competent drilling contractor who used their best endeavours to maximise sample recovery at all times. The DC drillers use a core barrel and wireline unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings. • For EXG drilling, no bias is observed when reviewing sample size vs gold grades. No historical information is available for review.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged*	• DC and RC samples have been geologically and geotechnically logged to a level of detail to support the appropriate Mineral Resource estimation, mining studies and metallurgical studies. Historical geological logs are available and good geological and grade correlation exists with different phases of drilling and field mapping undertaken from the companies involved and by EXG. . Specifically, each interval is visually inspected with a hand lens and the following parameters are recorded where observed: weathering, regolith, rock type, alteration, mineralization, shearing/foliation and any other features that are present. All DC is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralization, shearing/foliation and any other features that are present. This information is transferred electronically from the geologist to the database. • All drill holes are completely logged. Where present the logging recorded the abundance of specific minerals or the amount of alteration (including weathering) using defined ranges. All DC is

Criteria	JORC Code explanation	Commentary
		photographed both wet and dry after logging and before cutting. • The entire lengths of RC holes were logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample was returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core was logged over its entire length and any core loss or voids intersected were recorded.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• EXG DC was half sampled. The core was cut along its' long axis and the right hand side of the core, looking down the hole, was sampled. For historical drilling, no information is available for how the diamond core was sampled. • All RC drilling by Excelsior was collected on one metre down hole intervals. The recovered samples were passed through a cone and/or a riffle splitter to collect a nominal 2.5kg – 3.5kg sample. Historical drilling was riffle or cone split. No mention is made in the historical data of how wet samples were collected but logging suggests only minimal water was intersected occasionally. Wet samples drilled by EXG have been recorded in the database and were sampled through the cone splitter. • The sample preparation technique is appropriate for the style and type of mineralisation encountered within the samples collected. Review of the historical data confirms that the work undertaken is of sufficient quality to estimate the applicable JORC resource level. • EXG RC samples submitted to the laboratory are sorted and reconciled against the submission documents. Excelsior inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per • 50 fire assays. The laboratory also uses barren flushes on the pulveriser. No information is available for historic drilling, however, the position and tenor of gold mineralisation has been confirmed • Samples are collected in uniquely pre-numbered calico bags. For EXG, in the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. For DC, no core duplicates (i.e. half core) have been collected or submitted. No historical information is available from old data, however, EXG has twinned specific historical holes within each resource to confirm the old drilling results. • For EXG, the sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned. Whilst no historical information is available EXG believes that the sample size was standard industry practice being collected by companies with known quality control methods and procedures. The samples collected by both EXG and previous operators are sufficient for the type, style, thickness and consistency of mineralisation.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• The primary assay method used (Fire Assay by certified assay laboratories in Kalgoorlie and Perth) is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. The technique involves using a 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine. • For EXG drilling, the QC procedures are industry best practice. The laboratory is accredited and uses its own certified reference material. The laboratory has 2 duplicates, 2 replicates, 1 standard and 1 blank per 50 fire assays. At the same time EXG submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures Excelsior examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists. No historical information is available but it can be assumed that the

Criteria	JORC Code explanation	Commentary
		QAQC procedures used by the Kalgoorlie laboratories were of industry standard at that time
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Both technical director Mr David Potter and Exploration Manger Mr Bradley Toms have inspected RC chips where possible in the field to verify the correlation of mineralized zones between assay results and lithology/alteration/mineralization. • Excelsior has twinned historic holes to confirm position, mineralisation and geology of historic drilling. • All drill data is validated using DataShed and Micromine software. For EXG, primary data is sent digitally every 2-3 days from the field to Excelsior's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database. No historical information is available on how the original primary data was imported into an electronic data base. Historical reports were exhaustively reviewed and checked for any relevant information missing or otherwise. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control*	• Drill holes collar locations were supplied in digital format from previous owners or from historical reports. These locations were then validated by cross checking spatial distributions as shown by plans and cross-sections. Where possible hole locations were checked on ground but in most cases rehabilitation of the drill collar prohibited this. It is considered that the holes are spatially accurate enough to allow for a JORC resource to be calculated. EXG utilises the services of registered contract surveyors to pick up drill hole collars to within 20mm. Down hole surveys are completed for each RC and DC drill hole using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications. • Drilling at all locations were conducted on either historical local grids or AMG84_51. Grid conversions from each local grid to AMG84_51 are available in various reports. These conversions were supplied to the previous owners by local licensed Kalgoorlie based surveyors. • All resource estimations were done converting the AMG_51 co-ordinates into the MGA94, Zone 51 grid system. • Elevation is Australian Height Datum • Excelsior uses a LiDAR survey accurate to 0.1m, flown in 2012, to generate a 3d topographic surface at prospects.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The mineralization was sampled by Reverse Circulation (RC) and Diamond Core (DC) on a 20m x 10m to 40m x 20m drilling spacing. The drill spacing is appropriate to the reported JORC category reported. • The drill spacing, spatial distribution and quality of assay results is sufficient to support the JORC classification of material contained within this report and is appropriate for the nature and style of mineralisation being reported.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The bulk of the mineralized zones are perpendicular to the drilling direction. Structural logging of orientated drill core and/or surface mapping supports the drilling direction and sampling method. • No drilling orientation and sampling bias has been recognized at this time.
Sample security	• *The measures taken to ensure sample security.*	• Sample security is part of Excelsior's QAQC and sampling procedures. RC samples are delivered directly from the field to the Kalgoorlie laboratory by Excelsior personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an Excelsior generated sample submission list and reports back any discrepancies. No historical information is available. • DC is transported daily directly from the drill site to EXG's secure core processing facility by EXG personnel with no detours. The core is then placed on racks within a secure shed and processed until it requires cutting. Core is then transported directly by EXG staff to the Kalgoorlie assay laboratory where it is cut in half by laboratory staff and then sampled by EXG staff. The core is then prepared for assay in Kalgoorlie to the pulverising stage whereupon the laboratory transports it using a contractor directly to their Perth based assay facility.
Audits or	• *The results of any audits or reviews of sampling techniques and*	• A full review and check for any relevant data been undertaken. An

Criteria	JORC Code explanation	Commentary
reviews	*data.*	internal EXG review of sampling techniques and procedures was completed in March 2013. A DC logging and sampling review was completed in July 2013. No external or third party audits or reviews have been completed.

Section 2 Reporting of Exploration Results - Lochinvar

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The results reported in this Announcement are on granted Mining Leases which have a rolling 21 year renewal system. There are no Native Title Claims over these tenements. GPM Resources Pty Ltd is a wholly owned subsidiary of Excelsior Gold Limited. State Government Royalties are applicable. • Lochinvar – M24/244, GPM Resources Pty Ltd • At this time the tenements are believed to be in good standing. There are no known impediments to obtaining a license to operate, other than those set out by statutory requirements which have not yet been applied for.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and is used as a guide to Excelsior's exploration activities. Previous parties have undertaken geophysical data collection and interpretation, soil sampling and drilling.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Lochinvar – Lochinvar mineralisation is present with basalt and ultramafics rocks. Foliation and bedding strike north- south with generally steep dips. Strike-slip shearing followed by late, mainly WNW-trending cross faulting of the main structural feature. Mineralisation is mostly concentrated within a central zone of intense alteration. This zone of quartz-fuchsite-carbonate schists is the focus of very intense oxidation to in excess of 100m depth.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	• *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No exploration results are reported

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are reported
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration results are reported
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are reported
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are reported
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples*	• No exploration results are reported

Criteria	JORC Code explanation	Commentary
	• *– size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is* • *not commercially sensitive.*	• No further work is planned at this time

Section 3 Estimation and Reporting of Mineral Resources - Lochinvar

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The company utilizes a number of different software that is used to validate data during collection, before import into and within the database and after import into Micromine. EXG uses calico bags that are pre-numbered with a unique number to collect samples and logging of both DC and RC is via a digital logging system that uses fixed formats and standard codes. This information is emailed to the database administrator who imports the data via a standard procedure and the geologist then validates the data once in the database. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary field checks are made to confirm validation issues
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the systems and the gold distribution are complex. As such the company has not report measured resources regardless of drill and sample density. The overall understanding of the mineralisation and controlling factors is well understood from the mapping and recent drilling of RC and DC holes. Geological and structural continuity is demonstrated in the available data sets. • The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole surrey data. Hence EXG has twinned historical holes to confirm historical results and location of the mineralisation. This twinning has confirmed the historical data and combined with the new RC and DC drilling, high confidence in the geology and mineralisation is developed to support the JORC classified resource estimate. • Different interpretations of the gold mineralisation wireframes have been undertaken to assess the influence on mineral resource estimation and mining economics. This work demonstrated that a possible +/- 10% difference exists between different lode interpretations. Where geological interpretation has a high degree of uncertainty it is classified as inferred regardless of modelling parameters. • Detailed mapping, sampling of historical workings (including the existing open pits) provides confidence that the style of gold mineralisation is similar to other known deposits such as in the area. The mineral resource estimate process includes the building of a geological and structural framework that adds to the understanding of the mineralisation system. This framework is built from geological mapping, drill hole interpretation and geophysical images. • Continuity of geology and structure can be identified and traced between drill holes by visual, geophysical and geochemical characteristics. The gold distribution within certain structures does display a high nugget effect; however gross high grade positions and plunge controls can be determined.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Resource extents for each deposit are as follows • Lochinvar – 440m strike down to 150m below surface, average true width 5-10m
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	• Block models were estimated by using Ordinary Kriging with Micromine software. Estimation parameters were determined using QKNA analysis on selected blocks for each mineralisation type. Estimations were run within the EXG mineralised wireframes using the assay data determined by EXG. • Comparison models were conducted by EXG which confirmed that

Criteria	JORC Code explanation	Commentary
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model* *data to drill hole data, and use of reconciliation data if available.*	the estimation process was appropriate and results were similar in nature. • No consideration has been made to by-products • Test work to date to has determined no deleterious elements are present • Drilling density varies from 20m x 10m up to 40m x 20m • Block size was used by EXG staff to represent likely mining methods. With sub-blocking applied in order to ensure block volumes were within +/- 0.5% of wireframe volumes. Primary block sizes were: • Lochinvar – block size 10mN x 2mE x 4mRL • Block sizes were chosen to represent the most likely selective mining units when extraction is by open pit method utilizing a traditional open pit mining taking into account orientation and dimensions of modelled lodes. • Blocks were hard bounded with mineralised wireframes generated by EXG staff geologist. • One metre composites had variable top-cuts applied to them for each domain using geostastical methods Top cut determination undertaken by Excelsior and was based on population breaks using cumulative frequency curves and probability plots. Tops cuts used were: • Lochinvar – two domains present, both with an upper cut of 10g/t Au • A comparison of drillhole data to block estimates was used for validation of un-biasness.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were based on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A nominal lower-cut off grade of 0.6g/t Au was used for modelling based on geological and grade continuity mindful of possible economic breakeven grades. Recent pit optimisation studies suggests economic cut-off grades are in the order of 0.5 to 0.85 g/t Au
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Resources are reported at a cut-off grade of 0.6g/t Au to reflect possible economic grades via traditional open pit mining and processing via a 1mtpa (or larger) processing plant. • Minimal mining widths of 2metres are assumed
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Detailed waste and ore characterizations have been commenced. • Metallurgical testwork has been undertaken as summarised below: • Lochinvar – from diamond core test work
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• No environmental issues have been recorded or reported from previous mining undertaken within the areas as such the assumption is no major environmental exist within these already disturbed areas. • No Environmental studies have also been completed to date.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk Density data was collected for rock and weathering types from diamond drilling undertaken by EXG. Densities used f were oxide (ore associated with quartz veining) 1.85, transitional 2.3 and fresh 2.7. • The bulk densities used in the Resource Model take into account void spaces and vugs within differing rock and weathering types. • The bulk densities are comparable to previously used bulk densities used during the historic mining of the existing historical pits completed in the 1990's and also to other mining operations in similar rock and weathering types in the local area.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	• Initial indicative classifications are based on a set of variable parameters and search ellipsoids that become more "relaxed" with each pass. These parameters and search ellipsoids are unique to individual lodes and domains within each deposit and are based on geostastical and geological analysis. The final criteria for each run are decided after comparing the effects of changing each of the

Criteria	JORC Code explanation	Commentary
	• *Whether the result appropriately reflects the Competent Person's view of the deposit*	individual variables. • Four separate runs are undertaken for each block with the first run having the most stringent set of criteria and the last the least. Such as • Pass 1 = Highly Confident ~ Measured • Pass 2 = Confident ~ Indicated • Pass 3 = low Confident ~ Inferred • Pass 4 = very low Confident ~ Unclassified • Excelsior follows the JORC classification system with final individual block classification being assigned by statistically methods and visually taking into account the following factors and adjusting on: • Drill spacing and orientation. • Average distance to fill individual blocks. • Number of holes and points used to fill the block. • Statistical analysis of results. • Initial Classification of the block itself and that of surrounding blocks, and Lode position and confidence in interpretation • Excelsior does not classify any resources that make use of historical data as Measured due to varying QAQC data. Those blocks that were nominally classified as Measured were automatically reclassified as Indicated. Further, Excelsior does not classify any resources that are based on historical data as Indicated unless this has been confirmed by drilling undertaken by the Company. Those blocks that were nominally classified as Measured/Indicated where confirmation drilling has not been undertaken are automatically reclassified as Inferred. • The model and associated calculations utilised all available data and whilst depleted for known workings no adjustment was made for smaller undefined workings.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 19 February 2014 ASX:EXG 'Kalgoorlie North Gold Project PFS Maiden Gold Ore Reserve 409,000ozs Au' The competent person has reviewed this work.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The resource has been classified as Indicated or Inferred due to the reliance on various historical drill programmes undertaken between 1984 and 2002. Any blocks despite drill density being of a degree to demonstrate excellent grade and geological continuity that may have been classified as measured have been re-classified to Indicated or Inferred. • The block model estimate is a global resource estimate which has block sizes chosen at the expected "SMU" selection size. Block grades will tend to be smoothed between the drill hole sections but should represent the total contained tonnes and metal of the mineralisation.

JORC Table 1 Checklist of Assessment and Reporting Criteria – VETTERSBURG SOUTH

Section 1 Sampling techniques and data – Vettersburg South

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The mineralization was sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on variable drilling spacing ranging: • Vettersburg South –from 30m x 30m grid spacing • The holes were generally drilled to optimally intersect the targeted mineralized zones. It is noted that drilling has failed to adequately test for cross cutting structures that may or may not influence gold distribution. • The drill hole locations appear to have been designed to allow for spatial spread of samples across multiple mineralized zones and different rock types. All RC recovered samples were collected and passed through a cone splitter. • All RC drilling by were collected on one metre down hole intervals. The recovered samples were passed through a cone and/or a riffle splitter to collect a nominal 2.5kg – 3.5kg sample. Samples were composited over 2 to 4 metres and were taken to a Kalgoorlie contract laboratory. The sample was then prepared by standard fire assay techniques with a 20 to 50g charge. • Upon receipt of results single metre samples that were anomalous and/or of geological interested were assayed.

Criteria	JORC Code explanation	Commentary
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• The resource is based on information collected from either RC or DC drilling. No RAB or open hole percussion holes were included in grade estimations.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Limited historical information is available on sampling recoveries and QAQC methods within the historical reports reviewed. However, given the companies involved (Aberfoyle and Goldfields) and that the drilling was conducted between 1985 and 1994 it is considered that the work undertaken is of sufficient quality to estimate an Inferred JORC resource.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* *The total length and percentage of the relevant intersections logged.*	• Historical geological logs are available and good geological and grade correlation exists with different phases of drilling and field mapping undertaken from the companies involved and by Excelsior Gold. It is considered that the work undertaken is of sufficient quality to estimate an Inferred JORC resource. • Where required the logging recorded the abundance of specific minerals or the amount of alteration (including weathering) using defined ranges. • The entire lengths of RC holes were logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample was returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core was logged over its entire length and any core loss or voids intersected were recorded.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All RC drilling by Excelsior was collected on one metre down hole intervals. The recovered samples were passed through a cone and/or a riffle splitter to collect a nominal 2.5kg – 3.5kg sample. No mention is made in the historical drilling of how wet samples were collected but logging suggest only minimal water was hit at all three resource areas. • Review of the historical data confirms that the work undertaken is of sufficient quality to estimate an Inferred JORC resource. • Whilst no historical information is available it is of the belief that the sample size would be sufficient to detect a shear hosted gold deposit. However, the use of 4 metre composite samples is not considered an effective way to assay for narrow nuggetty gold vein style deposits that are known to exist in the area.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• The primary assay method used is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralization style. • No historical information is available but it can be assumed that the QAQC procedures used by the Kalgoorlie laboratories were of industry standard at that time.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Both technical director Mr David Potter and Exploration Manger Mr Bradley Toms have inspected drill core and RC chips where possible in the field to verify the correlation of mineralized zones between assay results and lithology/alteration/mineralization. • No drilling has been undertaken by Excelsior to confirm historical drill information. • No historical information is available on how the original primary data was imported into an electronic data base. Historical reports were exhaustively reviewed and checked for any relevant information missing or otherwise. All drill data was then validated using DataShed and Micromine software. • No adjustments or calibrations were made to any assay data used in this report.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control*	• Drill holes collar locations were supplied in digital format from previous owners or from historical reports. These locations were then validated by cross checking spatial distributions as shown by plans and cross-sections. Where possible hole locations were checked on ground but in most cases rehabilitation of the drill collar prohibited this. It is considered that the holes are spatially accurate enough to allow for a JORC inferred resource to be calculated. • Drilling was conducted on an historical local grid. • . • All resource estimations were done converting the AMG_51 co-

Criteria	JORC Code explanation	Commentary
		ordinates into the MGA94, Zone 51 grid system. • No DTM data was available for Vettersburg South with a surface DTM generated from supplied relative levels from hole-collars. •
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The mineralization was sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on variable drilling spacing ranging: • Vettersburg South –from 30m x 30m grid spacing • The drill spacing, spatial distribution and quality of assay results is sufficient to support the JORC classification of material contained within this report and is appropriate for the nature and style of mineralisation being reported. • Compositing has not been applied to reporting of exploration results.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this* • *should be assessed and reported if material.*	• The bulk of the mineralized zones are perpendicular to the drilling direction. Structural logging of orientated drill core and/or surface mapping supports the drilling direction and sampling method. • No drilling orientation and sampling bias has been recognized at this time.
Sample security	• *The measures taken to ensure sample security.*	• No historical information is available.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An exhaustive reviewed and checked for any relevant information data been undertaken. No external or third party audits or reviews have been completed.

Section 2 Reporting of Exploration Results – Vettersburg South

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The resource is on granted Mining Leases held by GPM Resources Pty Ltd, a wholly owned subsidiary of Excelsior Gold Limited. At this time the tenements are believed to be in good standing. There are no known impediments to obtaining a license to operate, other than those set out by statutory requirements which have notyet been applied for.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration by other parties has been reviewed and is used as a guide to Excelsior's exploration activities. Previous parties have undertaken geophysical data collection and interpretation, soil sampling and drilling.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Vettersburg South –gold mineralisation is located proximal to a north-south trending sediment/dolerite contact. The majority of the gold mineralisation is flat lying in nature within the oxide material and is probably related to supergene processes. Primary gold mineralisation is within a steeply dipping shearzone sub-parallel to the contact. A possible north-east striking structure appears to influence the gold mineralisation.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• No exploration results are reported
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are reported
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*	• No exploration results are reported

Criteria	JORC Code explanation	Commentary
	• *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• No exploration results are presented
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• No exploration results are reported
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• No exploration results are reported
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is* • *not commercially sensitive.*	• No further work is planned at this stage

Section 3 Estimation and Reporting of Mineral Resources – Vettersburg South

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The company utilizes a number of different software that is used to validate data during collection, before import into and within the database and after import into Micromine. • Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary field checks are made to confirm validation issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited site. The prospect is a recent acquisition by SBM and the prospect is likely to only contribute to production in the long term. As such this is not considered a core deposit at this time
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geology of the systems and the gold distribution are complex. As such the company has not report measured resources regardless of drill and sample density. • The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole surrey data. As such until the company has twinned historical holes to confirm results and location it does not classify this areas as indicated regardless of drill and sample density. • Different interpretations of the gold mineralisation wireframes have been undertaken to assess the influence on mineral resource estimation and mining economics. This work demonstrated that a possible +/- 10% difference exists between different lode interpretations. Where geological interpretation has a high degree of uncertainty it is classified as inferred regardless of modelling parameters. • Detailed mapping, sampling of historical workings (including the existing open pits) provides confidence that the style of gold mineralisation is similar to other known deposits such as in the area. • Continuity of geology and structure can be identified and traced between drillholes by visual, geophysical and geochemical characteristics. The gold distribution within certain structures does display a high nugget effect; however gross high grade positions and plunge controls can be determined.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Resource extents for the deposit is as follows o Vettersburg South – 200m strike down to 120mbs; average true width of both supergene/flat lodes and steep lode = 5m
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	• Block models were estimated using Ordinary Kriging with Micromine software. Estimation parameters were determined using QKNA analysis on selected blocks for each mineralisation type. Estimations were run within the EXG mineralised wireframes using the assay data determined by EXG. • Comparison models were conducted by EXG which confirmed that

Criteria	JORC Code explanation	Commentary
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterization).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modeling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	the estimation process was appropriate and results were similar in nature. • No consideration has been made to by-products • No test work has been undertaken to date to determine if deleterious elements are present • Drilling varies from 20m X 20m spaced drilling with some areas infilled to 10m X 10m spaced drilling. The primary block size is 10mN x 4mE x 5mRL. This block size was used by EXG staff to represent likely mining methods. • Block sizes were chosen to represent the most likely selective mining units when extraction is by open pit method utilizing a traditional open pit mining • Not applicable • Blocks were hard bounded with mineralised wireframes generated by EXG staff geologist. • One metre composites had variable top-cuts applied to them for each domain using geostastical methods Top cut determination undertaken by Excelsior and was based on population breaks using cumulative frequency curves and probability plots. Tops cuts used were: ○ Vettersburg South – 13g/t for supergene, 7g/t for primary, non for laterite • Comparisons of drill hole data to block estimates was used for validation of unbiasness.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were based on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A nominal lower-cut off grade of 0.6g/t Au was used for modelling based on geological and grade continuity mindful of possible economic breakeven grades. Recent pit optimisation studies suggests economic cut-off grades are in the order of 0.5 to 0.85 g/t Au
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Resources are reported at a cut-off grade of 0.6g/t Au to reflect possible economic grades via traditional open pit mining and processing via a 1mtpa (or larger) processing plant. • Minimal mining widths of 2metres are assumed
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Detailed Waste and ore characterizations have been not undertaken. • No metallurgical testwork has currently been undertaken.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• No environmental issues have been recorded or reported from previous mining undertaken within the areas as such the assumption is no major environmental exist within these already disturbed areas. • No Environmental studies have also been completed to date.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Densities have been determined utilising current and historical evidence from previous mining of similar deposits within the same rock types. Densities used for all of the deposits were oxide 1.85, transitional 2.3 and fresh 2.7. • The bulk densities used in the Resource Model take into account void spaces and vug spaces within differing rock and weathering types. • The bulk densities are comparable to previously used bulk densities used during the historic mining of the existing historical pits completed in the 1990's and also to other mining operations in similar rock and weathering types in the local area.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	• The models and associated calculations utilised all available data and whilst depleted for known workings no adjustment was made for

Criteria	JORC Code explanation	Commentary
	• *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* *Whether the result appropriately reflects the Competent Person's view of the deposit.*	smaller undefined workings. • Excelsior follows the JORC classification system with final individual block classification being assigned by statistically methods and visually taking into account the following factors and adjusting on: o *Drill spacing and orientation.* o *Average distance to fill individual blocks.* o *Number of holes and points used to fill the block.* o *Statistical analysis of results.* o *Classification of surrounding blocks, and* o *Lode position and confidence in interpretation* Excelsior does not classify any resources that make use of historical data as Measured due to varying QAQC data. Those blocks that were nominally classified as Measured were automatically reclassified as Indicated. Further, Excelsior does not classify any resources that are based on historical data as Indicated unless this has been confirmed by drilling undertaken by the company. Those blocks that were nominally classified as Measured/Indicated whereconfirmation drilling has not been undertaken are automatically reclassified as Inferred.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate was released to the ASX on 11 December 2013 ASX:EXG ' Satellite Gold Resource Upgrade' The competent person has reviewed this work.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• All the resources in this announcement have been classified as Inferred due to the reliance on various historical drill programmes undertaken between 1984 and 2002. Any blocks despite drill density being of a degree to demonstrate excellent grade and The block model estimate is a global resource estimate which has block sizes chosen at the expected "SMU" selection size. Block grades will tend to be smoothed between the drill hole sections but should represent the total contained tonnes and metal of the mineralisation. • Not applicable as no previous production has taken place